northern ireland water

Delivering what matters

Annual Information Return 2017

for Public Domain

Annual Information Return 2017

Public Domain Version

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Annual Information Return 2017

Section 1

Board's Overview

Board's Statement

In support of Northern Ireland Water's Annual Information Return (AIR), its board of directors is required by the Utility Regulator to prepare a statement on the compilation of AIR, explaining that it has satisfied itself as to the accuracy and completeness of the information provided.

The directors consider that the AIR provides a true and fair view of the state of affairs of NI Water for the financial year 2016/17. With respect to the preparation of the AIR, subject to any departure and explanation described in the commentary, the directors confirm:

- suitable accounting policies have been selected and applied consistently;
- judgements and estimates that have been made are reasonable and prudent;
- UK Accounting Standards and applicable law (UK Generally Accepted Accounting Practice) have been followed, subject to any material departures disclosed and explained in the financial statements.

The directors are responsible for keeping adequate accounting records that are sufficient to show and explain the company's transactions and disclose with reasonable accuracy at any time the financial position of the company and enable them to ensure that its financial statements comply with the Companies Act 2006 and the relevant provisions of the Water and Sewerage Services (Northern Ireland) Order 2006.

The directors who held office at the date of approval of this Board's Statement confirm that, so far as they are each aware, there is no relevant audit information of which the company's auditors are unaware and each director has taken steps they should have taken as a director to make themselves aware of any relevant audit information and to establish that the company's auditors are aware of that information.

The Board's Statement sets out how NI Water's Board has satisfied itself that the information provided in the AIR is as reliable, accurate and complete as is reasonably practicable.

Processes and Internal Systems of Control

The AIR has been compiled in accordance with NI Water's AIR Completion Manual, which ensures clear ownership of AIR data, evidence of peer review and procedural documentation covering the compilation processes were followed in completing the AIR submission.

The AIR Completion Manual details roles, responsibilities and governance procedures, and provides guidance and templates for the completion of AIR methodologies, data tables and company commentaries.

Project Governance

The AIR project was coordinated by the Regulation Manager and representatives (senior managers) from relevant functional areas, i.e. those functions which contribute data to the AIR submission.

The Regulation Manager ensured:

1. information was disseminated to and from functional working groups;
2. coordination of cross-functional working groups;
3. adherence to the AIR submission programme;
4. implementation of Reporter's recommendations.

Senior managers from across NI Water were responsible for:

- ensuring that the Utility Regulator's AIR reporting requirements were understood and followed;
- ensuring that relevant AIR line methodologies were updated in line with the reporting requirements;
- coordinating the population of data tables and the drafting of associated company commentaries in accordance with line methodologies and reporting requirements in compliance with the AIR programme;
- ensuring that relevant line methodologies, data tables and company commentaries were reviewed and approved in accordance with the AIR Completion Manual's roles and responsibilities matrix.

In order to maintain accuracy, consistency and a clear audit trail, roles and responsibilities for each element of the AIR submission were defined for the three key components of the AIR submission, namely:

- line methodologies,
- data tables, and
- company commentaries.

Population of data tables and drafting of associated company commentaries was in accordance with the Utility Regulator's AIR reporting requirements. In addition, company-specific methodologies (line methodologies), explaining how raw data is collected, processed and input to the data tables, were updated and adhered to when populating data tables and drafting company commentaries.

Authors, reviewers and approvers of line methodologies, data tables and company commentaries were designated for all data in the AIR submission. To ensure consistency of reporting for AIR, every item of data provided in the AIR tables had a designated author, reviewer and approver. In all cases, the approver was an appropriate senior manager.

Independent Review

Audit plans were developed by the Reporter and external Auditor. The Reporter's audit plan was developed in accordance with the Utility Regulator's Reporter Protocol, and was agreed with NI Water and submitted to the Utility Regulator.

The Utility Regulator issued AIR reporting requirements on 31st March 2017. Audits were undertaken by the company's Auditor and the Reporter in May and June. Feedback from the Reporter and Auditor was used to amend the tables and commentaries where appropriate.

The complete AIR submission was endorsed by the Executive Committee and Board on 12th and 27th June 2017 respectively.

Board Involvement

In summary, the involvement of NI Water's Board in the completion of the AIR included:

- Reviewing monthly company business performance analyses;
- Considering the findings of the Reporter and Auditor as presented in June 2017;
- Reviewing, commenting on and approving the Board's Overview;
- Reference back to NI Water's Executive Committee and senior management team to verify corporate information;
- Executive Directors received regular reports on progress and reviewed, challenged, commented and influenced the content of the AIR.

The following measures help to ensure that the AIR complies with the Utility Regulator's reporting requirements and provides some assurance in respect of material assumptions and judgements included in the AIR commentaries:

- Clear accountability at senior management level for the ownership of all elements of the AIR. NI Water has established an accountability trail from the information providers to the line owners through to heads of function.
- Briefings on the importance of the AIR process have been disseminated to all staff involved in the data collection process.
- Every item of data in AIR has a designated author, reviewer and approver.
- Every provider of data produces a written methodology documenting the method used for the derivation of the data reported.
- Every item of financial data is prepared and reviewed by separate individuals and reconciled to the chart of accounts.
- Every item of financial data is reviewed against the Utility Regulator's guidance by a separate individual to the preparer and reviewer. This includes undertaking cross-checks of tables to ensure consistency.
- Before each item of data is included in the AIR it is reviewed and approved by senior management in the data provider's business area.
- NI Water facilitates access to allow the Reporter and Auditor to review all relevant information required to discharge their duties.
- The Board receives regular presentations during the course of the year on key performance indicators, regulatory performance and key issues reported in the AIR.
- The Auditor presents to NI Water's audit committee and the Reporter presents to the Board at the conclusion of the AIR audit process.
- Directors may challenge the production and content of the AIR to satisfy themselves that their duties are fulfilled.
- In any case of uncertainty regarding data, commentary or line methodology, NI Water seeks advice and clarification from the Utility Regulator, the Reporter or the Auditor as appropriate.

Directors' Endorsement

NI Water's board believes that it has developed and applied processes, governance and systems of internal control sufficient to meet its obligations for the provision of information contained in the Annual Information Return.

Each director is satisfied that:

a) so far as he/she is aware, there is no relevant audit information of which NI Water's auditors or reporters are unaware;
b) He/she has taken all the steps that he/she ought to have taken as a director in order to make himself/herself aware of any relevant audit information and to establish that NI Water's auditors and reporters are aware of the information.

For and on behalf of NI Water:

Sara Venning
Chief Executive, Northern Ireland Water

Dr Leonard J. P. O'Hagan CBE
Chairman, Northern Ireland Water

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL RETURN - BOARD'S OVERVIEW

TABLE A - WATER SERVICE - KEY OUTPUTS AND SERVICE DELIVERY (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	2 REPORTING YEAR 2013-14	3 REPORTING YEAR 2014-15	4 REPORTING YEAR 2015-16	5 REPORTING YEAR 2016-17	6 REPORTING YEAR 2017-18	7 REPORTING YEAR 2018-19	8 REPORTING YEAR 2019-20	9 REPORTING YEAR 2020-21
A	**Consumer Service**											
1	DG2 Properties at risk of low pressure removed from the risk register by company action	nr	0	297	132	186	171	40				
2	DG2 Properties receiving pressure below the reference level at end of year	nr	0	1420	1257	1082	900	862				
3	DG3 Supply interruptions > 12hrs (unplanned and unwarned)	%	2	0.32	0.14	3.10	0.10	0.06				
4	DG3 Supply interruptions (overall performance score)	nr	2	1.98	0 97	11.72	1.14	0.66				
5	DG6 % billing contacts dealt with within 5 working days	%	2	100.09	99 92	99.97	99 96	99.98				
6	DG7 % written complaints dealt with within 10 working days	%	2	99.78	99.72	99.96	99 87	100.00				
7	DG8 % metered customers received bill based on a meter reading	%	2	98.73	99.11	99.11	99 23	99.52				
8	Call Handling Satisfaction	nr	2	4.54	4 63	4.65	4 59					
9	DG9 % calls not abandoned	%	2	98.45	98.40	97.99	99.43	99.54				
10	DG9 % calls not receiving the engaged tone	%	2	100.00	100 00	99.99	99 92	99.97				
11	Overall Performance Assessment (OPA) score (11 Measures)	nr	0	198	216	206	230	228				
12	Total Leakage	Ml/d	0	162	167	166	162	163				
13	Security of supply index	nr	0	100	100	100	100	100				
14	Percentage of NI Water's power usage derived from renewable sources	%	1	13.4	33.1	51.4	39.8	35.5				
B	**Quality Water**											
15a	% overall compliance with drinking water regulations	%	2	99.77	99 81	99.86	99 83	99.86				
15b	% compliance at consumers tap	%	2	99.63	99.74	99.78	99.74	99.77				
16	% iron compliance at consumers tap	%	2	97.25	98 08	98.95	98.40	98.66				
17	% Service Reservoirs with coliforms in >5% samples	nr	2	0.00	0 00	0.00	0 00	0.00				
C	**Water Outputs**											
18	Water mains activity - Length of new, renewed or relined mains	km	0	326	226	223	117	172				
19	Completion of nominated trunk main schemes	nr	0	2	0	1	2	1				
20	Completion of nominated water treatment works schemes	nr	0	0	0	3	1	0				
21	Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks	nr	0	1	0	1	0	0				
D	**Serviceability**											
22	Water infrastructure serviceability	Text		Stable	Stable	Stable	Stable	Stable				
23	Water non-infrastructure serviceability	Text		Stable	Stable	Stable	Stable	Stable				
E	**New Output Measures**											
24	Number of Catchment Management Plans	nr	0		3	5	3	7				
25	Number of lead communication pipes replaced under the proactive lead replacement programme	nr	0		0	401	1922	1867				
26	Number of school visits	nr	0	138	150	209	277	257				
27	Number of other education events	nr	0	35	38	59	65	64				
28	% Service Reservoirs where sample taps have been assessed and are to required	%	1				0.0	0.0				

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL RETURN - BOARD'S OVERVIEW

TABLE B - SEWERAGE SERVICE - KEY OUTPUTS AND SERVICE DELIVERY - WATER SERVICE (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	2 REPORTING YEAR 2013-14	3 REPORTING YEAR 2014-15	4 REPORTING YEAR 2015-16	5 REPORTING YEAR 2016-17	6 REPORTING YEAR 2017-18	7 REPORTING YEAR 2018-19	8 REPORTING YEAR 2019-20	9 REPORTING YEAR 2020-21
A	**Consumer Service Sewerage**											
1	DG5 Properties at risk of flooding - number removed from 2 in 10, 1 in 10 and 1 in 20 risk register by company action.	nr	0	66	11	28	7	7				
2	DG5 Properties on the 2 in 10, 1 in 10 and 1 in 20 risk register at the end of the year	nr	0	193	190	179	160	156				
B	**Quality Sewerage**											
3	% of WwTWs discharges compliant with numeric consents	%	1	93.3	92.0	92.4	92 8	93 6				
4	% of total p.e. served by WwTWs compliant with numeric consents excluding upper tier failures	%	1	98.8	98.0	98.4	98 6	98 9				
5	Small WwTW compliance (works greater than or equal to 20p e. but less than 250p.e.)	%	2				80.72	83 99				
6	Number of high and medium pollution incidents attributable to NI Water	nr	0	18	26	25	21	22				
C	**Sewerage Outputs**											
7	Sewerage activity - Length of sewers replaced or renovated	km	0	24	25	21	17	9				
8	Delivery of improvements to nominated UIDs as part of a defined programme of work	nr	0	38	11	17	26	11				
9	Delivery of improvements to nominated WwTWs as part of a defined programme of work	nr	0	12	17	16	3	2				
10	Small wastewater treatment works delivered as part of the rural wastewater investment programme	nr	0	14	7	18	4	8				
D	**Serviceability**											
11	Sewerage infrastructure serviceability	Text		Stable	Stable	Stable	Stable	Stable				
12	Sewerage non-infrastructure serviceability	Text		Stable	Stable	Stable	Stable	Stable				
E	**New Output Measures**											
13	CSO and EO discharges at which event and duration monitoring equipment has been installed	nr	0				0	0				
14	WwTWs upgraded to comply with PPC Regulations	nr	0				0	0				
15	Impermeable surface water collection area removed from the combined sewerage network	m^2	0				28,560	54,864				
16	Number of sustainable WwTW solutions delivered (p.e. ≥ 250)	nr	0				1	1				
17	Number of sustainable WwTW solutions delivered (p.e. < 250)	nr	0				0	1				

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL RETURN - BOARD'S OVERVIEW

TABLE C - EXPENDITURE & FINANCIAL PERFORMANCE MEASURES (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	2 REPORTING YEAR 2013-14	3 REPORTING YEAR 2014-15	4 REPORTING YEAR 2015-16	5 REPORTING YEAR 2016-17	6 REPORTING YEAR 2017-18	7 REPORTING YEAR 2018-19	8 REPORTING YEAR 2019-20	9 REPORTING YEAR 2020-21
A	**TOTAL EXPENDITURE**											
1	Total operating expenditure - water service (NI Water only)	£m	3	71 882	70.914	69.932	76.947	80.362				
1a	Total operating expenditure (PPP) - water service	£m	3	1 845	8.234	8.431	8.225	9.062				
2	Total capital expenditure (excl. adopted and nil cost assets)	£m	3	69 303	71.809	86.920	63.796	67.719				
3	Total operating expenditure - sewerage service (NI Water only)	£m	3	72.113	73.300	71.330	73.126	71.950				
3a	Total operating expenditure (PPP) - sewerage service	£m	3	26.488	24.896	24.323	25.096	25.377				
4	Total capital expenditure (excluding adopted and nil cost assets) - sewerage ser	£m	3	92.709	95.548	71.881	79.692	86.551				
B	**CURRENT COST ACCOUNTS - PROFIT & LOSS**											
5	Total Turnover	£m	3	366 398	361.313	364.407	367.287	372.851				
6	Current cost operating costs (including CCD & RC)	£m	3	-349.47	-343.723	-306.624	-315.156	-318.469				
7	Current cost operating profit	£m	3	19 872	19.799	59.111	53.738	56.925				
C	**CAPITAL BASE & POST TAX RETURN**											
8	Capital Value Year - End (outturn)	£m	3	1,812.80	1,948 80	2,045.50	2,133.30	2,244.90				
9	Total net debt	£m	3	868.158	909.323	946.748	980.545	1010.647				
10a	Post tax return on capital	%	2	1.12	1.05	2.96	2.57	2.60				
10b	Pre tax return on capital	%	2	1.12	1.05	2.96	2.57	2.60				
D	**KEY FINANCIAL INDICATORS**											
11	Cash interest cover (funds from operations; gross interest	ratio	2	3.34	3.60	3.52	3.38	3.45				
12	Adjusted cash interest cover (funds from operation less capital charges; gross interest)	ratio	2	-0.03	0.27	0.91	0.83	0.91				
13	Adjusted cash interest cover (funds from operation less capital maintenance; gross interest)	ratio	2	1.70	1 67	2.00	1.76	1.58				
14	Funds from operations: debt	ratio	2	0.15	0.13	0.13	0.12	0.12				
15	Retained cash flow: debt	ratio	2	0.12	0.12	0.12	0.09	0.10				
16	Gearing: D/RCV	%	2	47.89	46.66	46.74	46.24	0.47				
17	Gearing: D/RCV (adjusted for PPP liability)	%	2		49.12	49.09	48.47	0.49				

Chapter 1
Monitoring Plan Outputs
Tables A and B

1.1 Improvements to Drinking Water and Environmental Quality

During 2016/17 we delivered record levels of wastewater compliance with 98.9%. Water quality compliance remains at some of the highest ever levels with 99.86% overall compliance. Fewer customers are facing the risk of low pressure and pollution incidents continue to be at near record low levels.

Our 'Production Line' approach aims to optimise performance from 'Source to Tap' and 'Sink to Sea'.

Drinking Water

Delivery of clean, safe drinking water is central to what we do. It underpins the public health and economy of Northern Ireland. Being able to rely on and have confidence in the quality of water that we supply is a fundamental expectation of our customers.

We measure the quality of drinking water at water treatment works, service reservoirs and consumers' taps across Northern Ireland. During 2016, we carried out more than 200,000 water quality tests and outperformed against our target for overall compliance with drinking water regulations.

Over the PC15 period, we have committed to proactive replacement of over 11,000 lead communications pipes at consumer properties in addition to lead pipe replacement under water main rehabilitation and in response to sample failures.

We continue to partner with key stakeholders to ensure a joined up approach to the removal and management of lead pipe in public and private water supply systems. In 2016/17 we replaced 1,867 lead pipes under a proactive programme compared to a target of 1,844.

Water Supply

A number of work streams have been included within the Water Production Business Improvement Programme to deliver a series of initiatives to improve supply interruption performance. These work streams have Business Improvement Project Management support and include a range of colleagues that incorporate both frontline and non-frontline staff.

One of the main aspects of training and upskilling will be in relation to CALM network training. This training has the potential to provide significant benefits, with reduced "own-goal" bursts, reduced customer contacts, reduced defect repair costs and, overall, providing better customer service.

We will seek to develop a DG3 strategy, focusing largely on minimising interruptions to customers and maintaining supplies by:

- Maintaining and investing in our network;
- Maintaining supplies to customers;
- Restoring supplies (where interruptions occur); and
- Keeping customers informed.

We are investing to improve the water supply infrastructure across Northern Ireland to further improve the service to our customers.
This includes laying large trunk mains to enable us to transfer water from one area to another and laying water mains in areas where there is a risk of repeat interruptions to supply or low pressure. Over 2016/17, we laid, renewed or relined 172km of water mains.

Following a successful pilot, NI Water has commenced installation of an integrated approach to the control of our service reservoirs using instrumentation, control and telemetry. A programme to roll this out this technology to over 200 sites is underway in the PC15 period. In addition, NI Water has finalised a draft Water Resource and Supply Resilience Plan which will inform investment in PC21 to improve the resilience of our network of assets. This is the first time an integrated plan has been developed examining both water resources and critical period scenarios.

Wastewater

Wastewater activities have been merged to create a business area covering wastewater activities from 'sink to sea'. The 'production line' approach has focused on finding more efficient ways of collecting and processing wastewater, enhancing the service we provide to customers and continuing to improve the quality of the environment, including:

- Review of the Customer Service Directorate operating model in relation to clearing sewer blockages and septic tank emptying – seeking to reduce repeat blockages, reduce customer calls and provide improved interaction with, and delivery of service to, the customer;
- The introduction of new van jetting equipment for a number of in-house teams, which is enabling reduction on repeat blockage numbers and customer complaints;
- A Wastewater Customer Forum was established to assist in optimising performance and improve customer satisfaction;
- Wastewater Performance Hubs have been used as a visual management technique aimed at empowering staff to identify and fix barriers to performance. It facilitates conversations in both directions between workforce and management, acts as a visual tool to highlight performance, and a point to collect and resolve issues. This process has also been rolled out to frontline staff.

We are committed to reducing pollution incidents. Our Pollution Reduction Strategy and Action Plan has informed the development and implementation of a wide range of activities ranging from proactive sewer de-silting to focused customer education campaigns.

There is ongoing tracking and monitoring of all reported pollution incidents, with root cause investigations undertaken in each instance. Weekly updates on Pollution Incidents are carried out with the Executive Team through the EC Performance Hub and the situation is reviewed in detail through monthly meetings of the cross-directorate NI Water Pollution Incidents Group. In addition to in-house monitoring, there are quarterly meetings held with our Environmental Regulator, NIEA.

1.2 Delivering Service to Customers

NI Water delivered another strong year of service to customers in 2016/17, despite uncertainty over funding for PC15. Our customers are benefiting from record levels of service which is underpinned by our capital investment programme.

- We launched our new virtual Customer Service Centre (CSC) in April 2016, bringing contact handling, customer escalations and closer, work control and automation into a single function.

- The Metering and Billing teams are now combined, helping to streamline our metering, billing and cash collection processes to deliver a better experience for customers as efficiently as possible.
- We have established Production Lines in both water (Source to Tap) and wastewater activities (Sink to Sea) to enable efficient end-to-end processes.
- Performance hubs have been set up across the business as a means of managing business performance on a more proactive basis to review performance, and monitor actions to get performance back on track, sustain good performance or pursue outperformance.
- We have introduced an integrated supply chain for the delivery of capital programmes. A new Capital Programme Management Office (CPMO) will act as the link between the Strategic Client and Integrated Capital Delivery teams.
- We have created a Commercial Centre of Excellence to help deliver sourcing and demand efficiencies

During 2016/17, we continued to trial a range of new customer measures (developed in conjunction with the Utility Regulator, CCNI and DfI) intended to replace the current call handling satisfaction measure. We will continue to monitor them in 'shadow mode' through the PC15 period, with a view to including them as regulatory targets in PC21.

Customer Service Centre

The new Virtual Customer Service Centre (CSC) has been operational from April 2016, bringing all customer contacts, customer escalations, work control, telemetry control, and management of our mobile work management system, Major incident Planning and Options Engineering into a single function. While staff continue to be based across a number of different locations, they are starting to operate as a single team. Design work is ongoing to integrate the teams with a focus on central operational control and the provision of excellent customer service.

The CIMS 2 (Customer Information Management System) project has been completed. This has the seen the introduction of a google interactive map on our website giving our customers details including the estimated restoration time of unplanned and planned interruptions to their water supply.

Changes have been made to our website to make it more customer orientated and simple to use. We have developed a digital strategy which will help modernise our customer interactions, optimising our internal processes and communications, enabling us to become more efficient through the use of technology.

Metering and Billing

The Metering and Billing Team is an example of colleagues working together, across functions, to benefit all areas of the business and improve the service offered to the customer. With full responsibility for the end to end process, connection to collection, we are improving our processes and information systems to not only ensure that they are fit for purpose, but offer our customers the best service we can.

We are focusing on our data systems to ensure everyone is billed equitability whilst improving the processes and technology employed to make them more efficient and effective. To date we currently estimate a revenue benefit of over £1m directly from the Metering and Billing project work. We are also currently piloting the introduction of new technology to streamline the meter reading and billing process to enhance NI Water's digital offering.

1.3 Delivering Sustainable Services

Catchment Management Plans

Seven Catchment Management Studies (CMS) have been completed (achieving the 2016/17 target) in the following drinking water catchment areas:

- Dunore Point WTW
- Castor Bay WTW
- Moyola WTW
- Ballinrees WTW
- Lough Macrory WTW
- Lough Fea WTW
- Glenhordial WTW

The CMS aim is to undertake a scoping and planning study of drinking water catchments. Using the approach advocated in the UK Water Industry Research (UKWIR) framework for quantifying the benefits of catchment management, to establish the basis for a programme of management that provides business benefits to NI Water.

Diffuse water pollution and insensitive land management may pollute surface and ground water supplies with substances such as nutrients, pesticides and microbial pathogens. These unwelcome substances increase the capital and operating costs of water treatment, increase the quantity of effluent and waste produced, and increase the carbon footprint of the industry.

Where such risks are identified in drinking water catchments, NI Water aims to implement catchment management schemes that improve raw water quality, enhance water resources, and reduce future catchment-based risks to raw water quality and quantity.

We also want to meet NI Water's obligations as a responsible landowner whilst adopting an approach which gives a sustainable reduced cost for treating water to a high quality. The Catchment Management Studies will inform where future SCaMP NI projects are possible to sustainably improve raw water quality and the environment.

In addition to this, NI Water has successfully bid for and been awarded €4.9million of EU INTERREG VA funding for a cross-border SCAMP project which will be known as the 'Source to Tap' project. Focusing on the Erne and Derg cross-border catchments, it will be carried out in partnership with Irish Water, AFBI, Ulster University, the Rivers Trust and East Border Region. Working together, the project team will engage with the community to increase awareness of the importance of protecting drinking water supplies; pilot best practice forestry measures; restore peatland on riverside stretches formerly used for forestry and pilot a land incentive scheme to reduce contaminants such as pesticides and sediments from getting into watercourses. Together, this information will be used to assess the benefits of sustainable catchment management and to produce a plan to help manage cross border drinking water sources in the future.

Energy conservation

A dedicated energy efficiency programme has been initiated during the 2015-21 Price Control period. The objectives of the efficiency programme are to reduce consumption (kWh), move consumption from peak tariff rates to off peak tariffs, increase income (from mainly government schemes) and reduce our greenhouse gas emissions.

The programme is being managed in the following main areas:

- increase the use of renewable energy;
- efficiency within Water;
- efficiency within Wastewater;
- efficiency at PPP sites and
- miscellaneous areas such as office buildings.

During 2016/17, the efficiency programme reduced consumption by over 2GW and therefore reduced our carbon emissions by approximately 875 tonnes.

Storm water separation

During PC15 NI Water has planned to remove the equivalent of nineteen hectares of impermeable area surface water runoff from its combined sewerage systems. The benefits of surface water removal include freeing up system capacity, reducing out-of-sewer flooding risks and reducing wastewater pumping and energy requirements with associated reductions in maintenance activities and carbon emissions.

1.4 Health and Safety

NI Water's vision for safety, health and the environment is to lead the way within the water industry in the pursuit of raising standards and performance through the identification and adoption of industry best practice, and continuing business improvement. We strive toward our 'Zero Harm' ambition for all of our staff, contractors, customers and our environment through prudent risk management, responsible corporate governance and the development of an empowered, valued, engaged, accountable and competent workforce.

In 'Delivering What Matters' on Safety, Health and the Environment, NI Water will utilise a new 3-year Strategic Safety Plan to ensure direction, leadership, management and control of the activities and processes necessary to deliver on continual business improvement and implementation of industry best practice. Focusing upon 4 stated key strategic themes; Communication, Co-operation, Consultation, and Continual Improvement, we will provide necessary levels of assurance for our CEO, Board, and Executive Committee whilst reducing corporate risk and steering our organisation closer toward our corporate ambition of 'Zero Harm'.

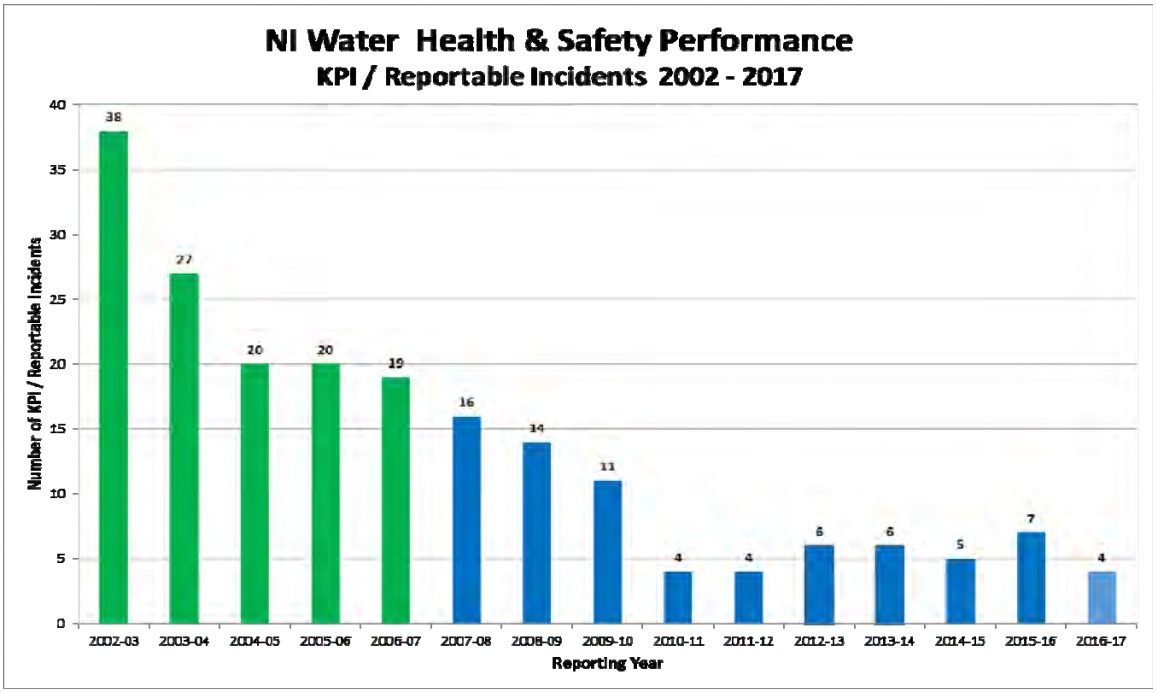
During 2016 an Independent Review of Health and Safety Leadership & Management at NI Water was completed, and after review of our existing Safety Management Systems, determined that NI Water had, "…a robust management system in place".

Recent safety initiatives within NI Water have included the creation of a number of new working and focus groups examining safe working processes around underground and overhead utilities, fire safety management, and management of occupational road risk (including safe drivers).

Our Health and Safety Focus Group established, in July 2015, has proven very effective, examining and leading in the safe management of NI Water contractor performance and was a finalist in NI Water's Recognition Awards.

In early 2017, and for only the second year, NI Water entered the Competitive Sector categories (for the Water Industry) at the ROSPA Occupational Safety & Health Awards achieving 'Highly Commended in the Water Industry'. A tremendous result reflecting further business commitment and continual safety improvement since 2016.

The table below indicates our annual safety performance on 'Reportable Incidents' since 2002.



1.5 Monitoring Plan Outputs

Tables 1.1 and 1.2 below provide a tabular summary of NI Water's delivery of services and outputs against the PC15 Year 2 Monitoring Plan targets. As can be seen, NI Water achieved or outperformed against all but three targets:

1. **Total Leakage:**

   Our leakage outturn figure for 2016/17 is 163 Ml/d against a target of 161 Ml/d. Increased widespread leakage was experienced across the whole network during the summer months. Coupled with a significant increase in burst mains during October/November, this created an extremely challenging situation from which we failed to recover to meet our target, despite additional resources being deployed.

2. **Percentage of service reservoirs where sample taps have been assessed and are to required standard:**

   The contract for sample tap assessment/replacement was awarded in 2016/17. Although, no sample taps were installed, the important task of finalising an approved design was completed before the manufacture of sample tap points commenced. It is anticipated that 100% of sample taps will be assessed and replaced as necessary within the PC15 period.

3. **CSO and EO discharges at which event and duration monitoring equipment has been installed:**

   Our initial target to install discharge monitoring equipment at 58 CSOs/EOs in 2016/17 has not been achieved. NI Water has adopted a cautious approach to the installation of new technology which has first to be proven to function adequately. To this end, during 2016/17 we identified and procured equipment necessary for trials at 10 CSOs and 20 wastewater pumping stations. It is anticipated that these trials will conclude in 2017/18. We plan to install all necessary monitoring equipment in the PC15 period.

Table 1.1 – Monitoring Plan Targets and Outturns: Water

	Units	2016/17	
		Target	Actual
DG2 Properties at risk of low pressure removed from the risk register by company action *	nr	200	211
DG2 Properties receiving pressure below the reference level at end of year	nr	932	862
DG3 Supply interruptions > 12hrs (unplanned and unwarned)	%	0.17	0.06
DG3 Supply interruptions (overall performance score)	nr	1.05	0.66
DG6 % billing contacts dealt with within 5 working days	%	99.90	99.98
DG7 % written complaints dealt with within 10 working days	%	99.50	100.00
DG8 % metered customers received bill based on a meter reading	%	99.00	99.52
DG9 % Calls not abandoned	%	99.00	99.54
DG9 % calls not receiving the engaged tone	%	99.90	99.97
Overall Performance Assessment (OPA) score (11 Measures)	nr	221	228
Total Leakage	Ml/d	161	163
Security of supply index	nr	100	100
Percentage of NI Water's power usage derived from renewable sources	%	25.0	35.5
% overall compliance with drinking water regulations	%	99.79	99.86
% compliance at consumers tap	%	99.69	99.77
% iron compliance at consumers tap	%	97.10	98.66
% Service Reservoirs with coliforms in >5% samples	%	0.00	0.00
Water mains activity - Length of new, renewed or relined mains *	km	237	289
Completion of nominated trunk main schemes *	nr	3	3
Completion of nominated water treatment works schemes *	nr	1	1
Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks *	nr	0	0
Water infrastructure serviceability	Text	Stable	Stable
Water non-infrastructure serviceability	Text	Stable	Stable
Number of Catchment Management Plans *	nr	10	10
Number of lead communication pipes replaced under the proactive lead replacement programme *	nr	3,688	3,789
Number of school visits *	nr	352	534
Number of other education events *	nr	114	129
% Service Reservoirs where sample taps have been assessed and are to required standard *	%	50	0

* PC15 cumulative targets/actuals

Table 1.2 – Monitoring Plan Targets and Outturns: Sewerage

	Units	2016/17	
		Target	Actual
DG5 Properties at risk of flooding - number removed from the 2 in 10, 1 in 10 and 1 in 20 risk register by company action *	nr	14	14
DG5 Properties on the 2 in 10, 1 in 10 and 1 in 20 risk register at the end of the year	nr	158	156
% of WwTWs discharges compliant with numeric consents	%	92.4	93.6
% of total p.e. served by WwTWs compliant with numeric consents excluding upper tier failures	%	98.3	98.9
Small WwTW compliance (works greater than or equal to 20p.e. but less than 250p.e.)	%	83.99	83.99
Number of high and medium pollution incidents attributable to NI Water	nr	27	22
Sewerage activity - Length of sewers replaced or renovated *	km	23	26
Delivery of improvements to nominated UIDs as part of a defined programme of work *	nr	37	37
Delivery of improvements to nominated WwTWs as part of a defined programme of work *	nr	5	5
Small wastewater treatment works delivered as part of the rural wastewater investment programme *	nr	9	12
Sewerage infrastructure serviceability	Text	Stable	Stable
Sewerage non-infrastructure serviceability	Text	Stable	Stable
CSO and EO discharges at which event and duration monitoring equipment has been installed *	nr	58	0
WwTWs upgraded to comply with PPC Regulations *	nr	0	0
Impermeable surface water collection area removed from the combined sewerage network *	m^2	57,000	83,424
Number of sustainable WwTW solutions delivered (p.e. ≥ 250) *	nr	1	2
Number of sustainable WwTW solutions delivered (p.e. < 250) *	nr	0	1

* PC15 cumulative targets/actuals

Chapter 2
Financial Performance Measures
Table C

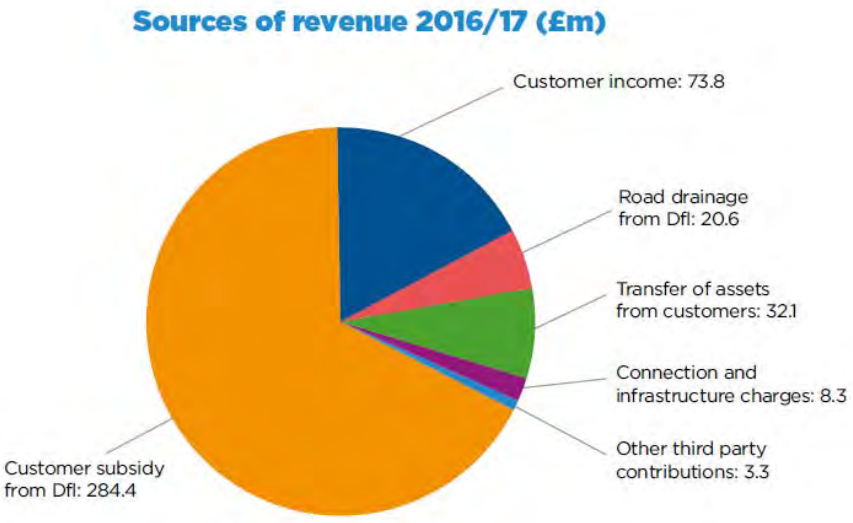
2.1 Financial Performance
Summary Statement of Comprehensive Income

	Year to 31 March 2017 (£m)	Year to 31 March 2016 (£m)
Revenue	**422.4**	413.5
Results from operating activities	**166.4**	163.4
Net finance charges	**(63.5)**	(64.3)
Profit before income tax	**102.9**	99.1
Income tax (expense) / credit	**(6.6)**	2.3
Profit for the year	**96.3**	101.4
Other comprehensive income/(expenditure) net of income tax	**(46.6)**	4.3
Total comprehensive income for the period	**49.7**	105.7

Revenue
Domestic consumers are not charged directly for water and sewerage services. As a result, NI Water is dependent on Government subsidy for around 67% of its total revenue. The customer subsidy from Government covered the full domestic charge and this arrangement will remain in place in 2017/18.

Revenue was £422.4m for the year to 31 March 2017 (2016: £413.5m). Included in revenue was £305.0m (2016: £303.5m) received from DfI, being subsidy of £284.4m (2016: £283.5m) and road drainage charges of £20.6m (2016: £20.0m).

The increase in the customer subsidy in 2016/17 was due to changes in the notional household tariffs (while the notional water tariff decreased, the notional sewerage tariff increased by more).

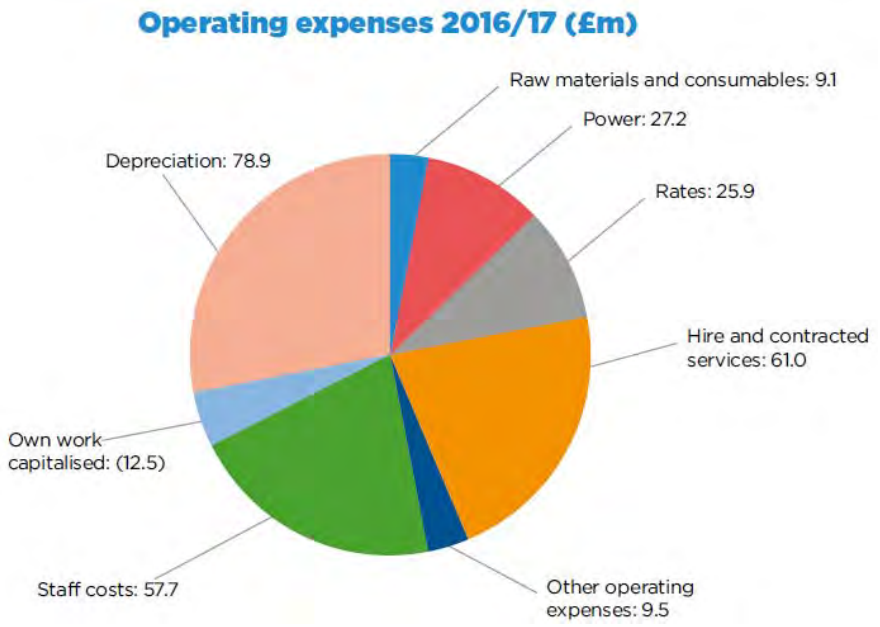


2.2 Costs (capital and operating) against expectations

Operating activities

Operating expenses in 2016/17 of £256.8m (2016: £251m) increased from last year. The increase primarily resulted from higher depreciation, higher hired and contracted service costs, offset in part by lower power costs.

Results from operating activities before interest for the year was £166.4m (2016: £163.4m).



Finance income and costs

The net finance costs are primarily due to interest on our borrowings of £43.6m (2016: £43.9m) and on our PPP liabilities of £19.8m (2016: £20.1m) and net finance costs on the pension fund of £0.2m (2016: £0.4m) partly offset by bank interest received of £0.1m (2016: £0.1m).

Taxation

The tax charge for the year was £6.6m (2016: credit of £2.3m) which takes account of a reduction in the rate of corporation tax. The effective tax rate for the year to 31 March 2017 was (6.4%) (2016: 2.3%). Given the capital allowances available on our capital investment programme we are not presently required to pay cash tax in relation to our core revenue streams.

Distributions

The Board will consider a proposal to declare a dividend of £24.5m in July 2017 (2016: £23.3m).

Capital Structure

The Statement of Financial Position at 31 March 2017 is summarised below.

- Total assets increased by 4.0% to £2,928m (2016: £2,816m).
- Our net debt figure was £1,218.6m at 31 March 2017 (2016: £1,193.1m).
- Gearing (the ratio of net debt to equity and net debt) was 48.4% (2016: 48.4%).

Summary Statement of Financial Position

	At March 2017 (£m)	At March 2016 (£m)
Total non-current assets	**2,887.3**	2,776.2
Total current assets	**41.0**	39.5
Total Assets	**2,928.3**	2,815.7
Equity	**1,300.8**	1,274.4
Total non-current liabilities	**1,484.4**	1,404.2
Total current liabilities	**143.1**	137.1
Total liabilities	**1,627.5**	1,541.3
Total equity and liabilities at 31 March	**2,928.3**	2,815.7

Liquidity

Operating activities generated a net cash inflow of £212.6m (2016: £195.8m). Net cash outflows of £147.8m (2016: £134.8m) related to investing activities. Net financing activities created a cash outflow of £64.3m (2016: £58.8m).

Our working capital requirements are met from a committed working capital facility of £20m and from available positive cash balances. Interest is accrued on the working capital facility at floating interest rates based on London Inter-bank Offered Rates (LIBOR).

Investing activities included the acquisition of property, plant and equipment of £149.0m (2016: £136.6m), proceeds from the sale of property, plant and equipment of £1.1m (2016: £1.7m) and interest received of £0.1m (2016: £0.1m).

Dividends

Dividends paid to DfI during the year totalled £23.3m in respect of the previous financial year (2016: £24.7m in respect of 2015).

Pension funding

The pension scheme was valued at a liability of £66.0m at 31 March 2017 (2016: liability of £7.2m). This was made up of a total market value of assets of £239.7m (2016: £207.6m) less actuarial value of liabilities £305.7m (2016: £214.7m).

The increase in the liability has been driven primarily by actuarial losses arising from a decrease in the discount rate assumption on fund obligations offset somewhat by actuarial gains on the assumptions on performance of fund assets.

Capital

We have invested £1.9 billion in Northern Ireland's water and sewerage infrastructure since our formation in 2007/08.

Around £154.3m of capital investment was delivered during 2016/17. The Company spent around £99.7m in 2016/17 on maintaining the current assets. Around a further £54.6m was spent to deliver quality enhancements, improve service and accommodate growth. Investment of £155m is planned for 2017/18.

2.3 PPP contracts

Project Alpha

A contract with Dalriada Water Limited was signed on 30 May 2006 for the provision of bulk drinking water supplies. This has a capital cost in the region of £111 million. The service provision commenced roll-out from November 2008. The contract is for 25 years with an end date of 29 May 2031. The cost and net book value of assets included in Property, Plant and Equipment at 31 March 2017 is £119.24m and £89.79m respectively (2016: £117.68m and £91.86m). The amount included in PPP Creditors at 31 March 2017 is £90.38m (2016: £92.50m).

Project Omega

A contract with Glen Water Limited was signed on 6 March 2007 for the provision of sewage treatment / sludge disposal at six sites with a capital cost in the region of £132 million. The contract is for 25 years with an end date of 5 March 2032.

Kinnegar Wastewater Treatment Works

A contract with Coastal ClearWater Limited was signed on 30 April 1999 for the provision of sewage treatment which covered the upgrading of the Kinnegar Wastewater Treatment Works with a capital cost in the region of £11 million. The contract is for 25 years with an end date of 30 April 2024.

2016/17 PPP Cash Payments[1]

On Balance Sheet ***Alpha***	**£k**
Opex	9,062
Interest	6,562
Total P&L Impact	**15,624**
Capital Repayment	2,122
Life Cycle Maintenance	1,516
Total Balance Sheet Impact	**3,638**
Total PPP Payments	**19,262**
Effective Interest Rate used to calculate Alpha finance charge	**3.57%**

Off Balance Sheet	***Omega (£k)***	***Kinnegar (£k)***
Opex	23,039	2,338
Residual Interest	3,370	275
Total PPP Payments	**26,409**	**2,613**

Estimated Residual Value at End of Contract

Alpha	£84m
Omega	£113.5m
Kinnegar	£5.98m

[1] Details of PPP contractual performance failures are set out in the commentary for AIR table 42.

2.4 Regulatory Capital Value (RCV)

The Regulatory Capital Value (RCV) has been developed for regulatory purposes and represents the capital base established for the purposes of setting price limits.

In line with Regulatory Accounting Guideline (RAG) 1.04, this note is compiled using figures assumed in setting prices during the Price Control (PC) process. Figures in 2016/17 are therefore consistent with figures contained within the Water and Sewerage Service Price Control 2015-2021 (PC15) published by the Utility Regulator in December 2014.

Within the RCV, the prior year balance and in year capital expenditure have been indexed by the average Retail Price Index (RPI) over the year to March.

	At 31st March 2017 £'m	At 31st March 2016 £'m
Prior Year Closing RCV	2,133.3	2,045.5
Indexation and other adjustments	45.7	22.0
Opening RCV	2,179. 0	2,067.5
Capital expenditure	129.3	127.9
Infrastructure renewals expenditure	25.0	24.6
Infrastructure renewals charge	(25.0)	(24.6)
Grants & contributions	(6.3)	(6.1)
Depreciation (including capital grants)	(55.9)	(54.8)
Disposal of assets	(1.2)	(1.2)
Closing RCV (pre adjustments)	2,244.9	2,133.3
Regulatory adjustments	-	-
Closing RCV	**2,244.9**	**2,133.3**

Chapter 3

Efficiencies

There was a reduction in day-to-day running costs of 2% (£3.2m) in 2016/17, and a 30% (£65m) reduction in running costs since 2009/10. We have more than halved the efficiency gap with the leading edge (frontier) water and wastewater companies in England and Wales from 49% in 2007/08 to 13% in 2014/15.

The current arrangements for the governance of NI Water as both a regulated Government Company and a Non-Departmental Public Body bring with it certain challenges, such as the short, medium and longer-term operational and capital funding requirements. The current system of setting the capital programme within the Utility Regulator's price setting process does not align with the annual cycle of public sector funding. We have had to adjust PC15 Final Determination output targets to reflect a shortfall in public expenditure in 2015/16, 2016/17 and 2017/18. NI Water is an asset intensive business and long-term planning is essential to improve services for customers today while investing to safeguard services for future customers. The uncertainty over medium term investment planning adds complexity and inefficiency to capital investment delivery and makes it increasingly difficult for us to maintain momentum to complete our programmes of work.

The Company is continuing to work closely with DfI and the Utility Regulator to make the case for certainty of funding and a medium term financial settlement to underpin the six-year PC15 Final Determination. In the meantime, NI Water ensures that the implications on the delivery of our services as a consequence of funding constraints, are fully analysed, managed, delivered and communicated to the public in a clear and responsive manner.

Some of the measures we have taken over 2016/17 to deliver a reduction in day to day running costs are as follows:

ICAT

Following a successful pilot, we are implementing 'Instrumentation, Control, Automation and Telemetry' (ICAT) technology to control our service reservoirs. The implementation programme will roll out the technology to over 200 sites in the PC15 period.

3D Mapping

Building on the success of our drone for 3D mapping of above ground assets, we have invested in a remote-controlled boat to carry out sonar surveys of our reservoirs.

Digital Technology

During 2016/17, NI Water developed its first Digital Strategy. Our intent is to proactively harness digital technology to improve the service experience we offer to customers, employees and stakeholders, and to drive efficiencies across our business in support of our strategic vision.

Energy Conservation

A dedicated energy efficiency programme has been initiated during the 2015-21 Price Control period. The objectives of the efficiency programme are to reduce consumption (kWh), move consumption from peak tariff rates to off peak tariffs, increase income (from mainly government schemes) and reduce our greenhouse gas emissions.

The programme is being managed in the following main areas:

- increase the use of renewable energy;
- efficiency within Water;
- efficiency within Wastewater;
- efficiency at PPP sites and
- miscellaneous areas such as office buildings.

During 2016/17 the year programme, the efficiency programme reduced consumption by over 2GW and therefore reduced our carbon emissions by approximately 875 tonnes.

Chapter 4

Competition

There are no developments to report in respect of inset appointment proposals, common carriage or water supply licensing proposals. NI Water has made no requests for common carriage or wholesale water supplies.

Annual Information Return 2017

Section 2

Tables and Commentary

Chapter 1 - Promoting the Efficient Use of Water

This report examines a range of water efficiency activities undertaken by the Northern Ireland Water for household and non-household customers over the course of this reporting period. The company is committed to promoting and improving water efficiency for all its customers.

These efforts have included using the methods that have been successful to date i.e. education schemes, distribution of water saving devices and working in partnership with other organisations on new projects, and by designing and introducing new strategies.

The Water Education Team (WET) consists of two full time employees who visit schools, community and specialist groups and organisations, and work in partnership with stakeholders and other partners. 60% of the Educator's time is spent promoting water efficiency.

The key elements of our strategy are as follows:

1. **Efficient use of water in the home**
   a) ensuring no leaks from taps, toilets, pipe joints etc.
   b) cistern displacement devices used where necessary
   c) efficient use of domestic appliances e.g. full load for washing machine, dishwasher
   d) selecting water saving option on appliances
   e) use of shower rather than bath, and using shower timer to reduce time spent in the shower
   f) shower head and water tap aerators are recommended

2. **Efficient use of water in the garden**
   a) awareness of the amount of water used through garden hoses and sprinklers
   b) encouraging use of water gun if using a hose
   c) encourage the use of water butts
   d) use water retaining gels for plant containers
   e) encourage use of mulch
   f) plant drought resistant plants

WET have attended a variety of external public events:-

- Men's Group - Woodstock Rd Library (April)
- Belfast City Council Older Peoples Event (May)
- Balmoral Agricultural Show (May)
- Sanville Care Home (May)
- Portglenone Country Fair (August)
- Moneydig Rural Community Group (December)
- New Mums Group (April, May, July and December)
- Killylea Senior Citizens Group (October)
- Moneymore Senior Citizens Group (November)
- Winter Information Event – Belfast City Council (December)
- St Katherine's Ladies Guild (January)
- Houban Community Hub, Belfast (March)

Events that were attended on request:

- Ballylumford Power Station (August)

- Kilroot Power Station (August)
- Ulster Bank x 2 (September)
- HSC Family Nurse Conference (September)

Staff who attended these events promoted the practice of water conservation by means of distributing leaflets, promotional items and giving advice on using water wisely.

During the reporting year, NI Water treatment sites have been utilised as an academic resource by Queens University Belfast and Ulster University. These visits provide students with an insight into the water treatment processes.

NI Water attended STEM (Sustainable Together through Environmental Management) Eco schools celebration day at Lough Neagh Discovery Centre on the 29 March 2017. This event promoted the importance of water conservation and how our future water users can play a major role in preserving this valuable resource.

The WET promotes water efficiency at NI Water's Education Centres at the Heritage Centre and Silent Valley where sessions take place in alternating weeks. Specific classroom talks on conservation are given to primary school children supporting the Eco Schools initiative or at their request. Monthly educational visits to the Wastewater and Water Treatment Centres for both schools and the general public are organised by the team.

We have seen demand continue for Key Stage 3 classroom visits, through the Home Economics department, over the last reporting period. We expect this to grow in the new school term given the high level of interest and request.

A variety of water efficiency promotional items are used whilst delivering all the above talks which include:

- Water-butt leaflets
- Waterwise Leaflet
- Promotional and educational leaflets
- School water audits
- Interactive games encouraging conservation
- Save-a-Flush
- Shower timers (5mins)
- Water cycle poster (teacher's aide)

Water efficiency leaflets are available for download from the NI Water website along with a printable poster "Stop those drips".

Household

1. Cistern Displacement Devices (CDD's)

These can be requested by the customer directly through NI Water's Customer Service Centre (CSC) or from the Education Team. For 2016/17 NI Water has distributed 1432 CDD's at school visits, community talks, shows and at the request of an organisation. All teachers were also issued with a sample. Community Groups receiving presentations on conservation also received a save-a-flush.

The calculation for the water savings achieved in 2016/17 report year is as follows:

S*O*F*(D*I) = Savings in litres

S= Savings per flush, O= Occupancy rate, F= Flushing frequency per person per day, D= Number distributed, I= Installation rate.

Values derived from the Ofwat Water Efficiency Targets were used to estimate the number of CDD's installed. Using the OFWAT Efficiency Report the volume displaced per flush was recorded as 2.5 l/per flush and flushes per person per day as recorded as 5. This figure is the average savings per flush achieved through the installation of save-a-flush, which are the CDD distributed by NI Water. An installation rate of 70% was due to the distribution method used i.e. through requests, schools and community groups. Occupancy rate was 2.5 from NISRA

Calculation:
2.5*2.5*5*(1432*0.7) = 31,325.000 l/per day = 0.031325 Ml/d

2. Distribution of Water Butts

During this reporting period, NI Water distributed water butts to community groups, schools and allotment groups. The total for this year is 13.

The calculation for the water savings achieved in 2016/17 report year is as follows:

S=V*F*1*N

S= savings per butt, V=volume of water butt, F= fills per year I= instillation rate, N= number of Water butts Using the OFWAT Efficiency Report the volume is company based (NI Water supplied thirteen 190L butts) the fills per year is estimated at 6 and the installation rate is 100%.

Calculation:
190*6*1*13 = 14,820 l per year:
14,820/365 days = 40.602739 l per day = 0.0000406 Ml/day

3. Household Water Audits

During 2016/17, the self-water audit for domestic households, which can be accessed through the company's website, have been 317 hits to the online audit. An advantage of the website self-water audit is that as soon as the customer completes the form the information is emailed directly to WET and this data can then be collated in a spreadsheet to accumulate water usage across NI Water's customer base.

Domestic Self-Water Audit Packs

Over the report year 2016/17 WET continued its conservation campaign "Spread the Word" to distribute self-audits to the parents of schoolchildren. There were 735 audits disseminated during all schools visited by the Team, the Principal then forwarded these NI Water Domestic Water Audits to the families of the children. A school returning 75% completed audits received a water saving pack including a water butt. The school with the highest percentage of returns also receive a cash prize.

To calculate the savings achieved through this initiative it is necessary to make assumptions on the savings achieved (Ofwat Water Efficiency Targets). The percentage acted upon is assumed to be 70%. It has been assumed that completed audit achieved savings of 10 litres per property per day.

D*A*S = Savings in litres

D = Number water audits carried out by company, A = Likelihood acted upon, S = Savings in litres per water audit.

From the figures supplied by IT division of the Corporate Affairs Team, 317 hits have been recorded for observations of the online water audit.

To calculate the savings achieved through this initiative it is necessary to make assumptions on the savings achieved (Ofwat Water Efficiency Targets). The percentage acted upon is assumed at 10% saving 10 litres per property per day:

Calculation: 317* 0.10* 10 = 317 l/per day = 0.000317 Ml/d

The number of audits distributed was 735 through Spread the Word
Calculation:
735 * 0.70 *10 = 5145 l/per day = 0.005145 Ml/d

4. Shower Timers

Over the reporting year, 2664 shower timers were distributed at schools, shows, events and presentations by NI Water staff. The installation rate of these can be assumed at 23% (Ofwat Water Efficiency Targets) a saving of 5 litres per property per day can also be assumed. The calculation for the savings achieved in 2016-17 report year is as follows:

D*I*S = Savings in litres

D = Number of shower timers distributed, I = Likelihood installed, S = Savings in litres per property per day.

Calculation: 2664* 0.23 * 5 = 3063.6 l/per day = 0.0030636 Ml/d

5. Water Audits Completed by Company

No audits were completed in the homes of customers 2016/17.

Presently in Northern Ireland, domestic customers do not pay for their water and wastewater services and customers are not metered. Therefore, the only way to help foster change in attitude and behaviour is by demonstrating to the customer how they can financially benefit i.e. save money, for example by reducing, the number of showers they have in a week or having a shower instead of a bath or the number of times the washing machine and or dishwasher is used.

Non-household

NI Water operates a larger user discount scheme that is dependent on the commitment of the customer to water efficiency. The customer will have to provide evidence of promoting water efficiency; this may be through changes in procedure, installing water saving devices, installation of recycling plants and the review of water efficiency by an independent industry expert. (www.niwater.com/largeusertariff.asp)

The NI Water website is updated and reviewed on a regular basis. The site has been developed to encourage water efficiency within the commercial customer sector. The areas included are:

- Why Save Water?
- What is Normal Water Use?
- What is a Water Balance?
- Water Efficient Plumbing Appliances?

The website is accessible to all customers with internet access enabling them to source information to assist them in making decisions about water efficiency.

6. Water Audits

During 2016/17 reporting period, 759 Water Audits for Schools were distributed by WET through Teachers Packs.

To calculate the savings achieved through this initiative it is necessary to make assumptions on the savings achieved (Ofwat Water Efficiency Targets). The percentage acted upon is assumed at 20% saving 10 litres per property per day:

D*A*S = Savings in litres

D = Number water audits carried out by company, A = Likelihood acted upon,
S = Savings in litres per water audit.

Calculation: 759*0.20*10 = 1518 l/per day = 0.001518 Ml/d

No Commercial Audits were distributed during this reporting period. The document is available on line as an advice leaflet for business customers titled “Advice for Business Customers” with an additional document “Business Water Audit”. Due to cost restrictions, these leaflets have not been published but are easily available on the NI Water website.

Savings and Costs

These savings have been achieved by adding together

- Household-Water Efficiency Methods
- Non Household-Water Efficiency Methods
- Other Water Efficiency Methods

Leakage: No savings or costs are sustained by NI Water through supply pipes being repaired, as NI Water does not operate a free/subsidised repair/replacement scheme. If NI Water repairs any leaking supply pipes, this will only happen after a leakage notice has been issued and the customer has failed to carry out sufficient work to rectify the problem. NI Water will then repair the supply pipe and any cost will be then charged to the customer.

Water Efficiency Methods

The majority of NI Water’s other Water Efficiency Methods are education based. As already mentioned NI Water has a dedicated Water Education Team (WET) consisting of two full time employees. These Education Officers deliver presentations to a variety of community and youth groups, organise/attend external events as well as attending educational establishments at all levels. Conservation classroom presentations are delivered weekly and we work with the Eco Schools Award scheme. The double decker Waterbus, a mobile education classroom provides presentations, displays, experiments, quiz, demonstrations, DVD, and computer facilities. This mobile classroom aims to make children aware of a range of water issues such as the water cycle, water for health, water sources, water/wastewater cleaning and water efficiency. The Waterbus programmes has been designed for Key Stage 2 (P5-P7) and we work closely within the revised curriculum. The service has been well received by Education Authority (EA) and we have reached 19,770 pupils during 2016-17 delivering NI water’s key message on water conservation. NI Water has a Wastewater Heritage Centre site at Duncrue Street, Belfast. This location provides an insight into the history of water supply and removal of waste along with the importance and techniques of wastewater management. We consider contact with schoolchildren to be the vital link with parents, bringing news and promotional items home and encouraging them to become water efficient and to be aware of the value of water

management. Ever since the introduction in April 2015 of the Key Stage 3 talks by NI Water's Education Team, 2,760 pupils have availed of this service, which is delivered through the Home Economics strand.

New interactive Education & the Community section on NIWater.com

Education And The Community - Northern Ireland Water

We have launched an updated Education & Community section with rich, informative content focused on informing water users about our key messages.

The extensive new interactive content is used to not only educate users but also to position NI Water as a key stakeholders in the community, addressing important water use issues with a slightly more informal tone of voice.

The content is primarily targeted at school pupils with an animated design but is equally accessible by adults. It has been benchmarked against other leading water companies' equivalent sections and has been built with future proofing in mind by using non-native code platforms.

Main interactive sections:

- **Bag It & Bin**

Bag it And Bin it - Northern Ireland Water

Scrolling content building on the key "Bag it and Bin it" message and the importance of not flushing the "dirty dozen" down the toilet.

- **Water Saving Calculator – How much water do you use?**

Why Save Water? - Northern Ireland Water

The calculator is designed to provoke awareness and thought on how much water households are wasting.

- **Silent Valley**

  Silent Valley - Northern Ireland Water

  This sub section sells Silent Valley as a visitor destination for families, groups and schools:
  - Image Gallery
  - Walking trails map
  - How to get there - embedded Google map for users to find directions from their address
  - Visitor information, downloads, podcasts.

NI Water has dedicated website pages with advice on household and commercial water efficiency. Included in these pages is a domestic self- water audit, which allows domestic customers to calculate their average daily consumption per resident. This audit has the added benefit of doing calculations automatically and provides NI Water with completed audits instantly once the customer has submitted it. The website also includes guidance on the types of appliances that could be installed into houses and business, which would help them to be more efficient in the future.

NI Water's Winter Preparation Campaign generated **122** media items between 1 September 2016 and the 28 February 2017 NI Water has highlighted throughout this past year the issue of water efficiency and in particular the potential for frozen pipes as part of its winter preparation campaign. The campaign generated 122 articles between 1st September 2016 and 28 February 2017.

The full **Don't Wait Insulate** message featured in **52** articles and generated a PR Value of **£28,896.18**. 73% of these articles were classed as Prime Positive. This message was very prominent throughout the period, with the phrase featuring in a large number of headlines. In addition to these articles that concentrated solely or mainly on the campaign, there were a further 56 articles which mentioned Don't Wait Insulate among a number of messages. **Overall**, Don't Wait Insulate was referenced in **108 articles (89% of the total).**

The **Utilities Winter Readiness Campaign** was the subject of 11 articles and produced a PR Value of £7,309.70. Much of this coverage was driven by a press release, which contained quotes from Mairead Meyer, Chair of the Joint Utilities Working Group. An accompanying photograph of Ronan Larkin of NI Water with representatives of other utility companies was included in most of the articles. These articles were classed Significant Positive as NI Water was featured prominently but not exclusively.

Education Visits were the subject of 20 articles and produced a PR Value of £23,273.78. These articles featured various NI Water representatives visiting schools and community groups and continued quotes and/or photographs.

The **Waterbus** was the subject of 13 articles and produced a PR Value of £17,088.23. These articles covered Waterbus visits to schools that promoted a number of messages including Don't Wait Insulate. Nearly all of these articles featured WET members of NI Water.

Winter Campaign - DUP conference featured in two articles. Both were a photograph of NI Water's Graeme Smyth at the conference.

Protecting pipes appeared in 6 items and produced a PR Value of £5,542.07. Among these items were two radio interviews with Ronnie Glendenning of NI Water.

The **Watersafe website address** featured in 38 articles (18% of the total).

This media coverage above generated a total PR Value of **£107,161.20**.

Efficiency Method	**Total**	**Cost**	**Savings per Ml/ day**
Household			
Measurable Methods			
Cistern Devices (0.57p each)	1432	816.24	0.031325
Water butts (£38.16 each)	13	496.08	0.0000406
Self-audit (Spread the Word)(0.04p each)	735	29.40	0.005145
Self-audit (On Line)	317		0.000317
Total		1341.72	**0.0368276**
Other Measurable Methods			
Shower timers (£1.10 each)	2664	2930.40	0.0030636
Gel Bags (£4.75 each)	0	0.00	0.000000
Trigger Guns (£4.83 each)	0	0.00	0.000000

Shower Heads (£27.90 each)	0	0.00	0.000000
Education Depart (UKWIR)		56,759.16	0.4764258
Total			**0.4794894**
Leaflets			
How water wise are you (0.10peach)	19376	1937.60	
Freezing Pipe (0.017p each)	12583	213.911	
Total leaflets		**2151.511**	
PR items			
Bookmark- “Flo” kids (0.07p each)	19761	1383.27	
Game: Snakes and Ladders (0.18p each)	753	135.54	
Stop Tags (0.43p each)	46647	20058.21	
Tap cover (£4.66 each)	0	0.00	
Ice scraper (0.73p each)	700	511.00	
Thermometer (0.76p each)	3189	2423.64	
Total PR		**24511.66**	
Non Household			
School Audits(0.19p each)	759	144.21	0.001518
Total			**0.517835**

NI Water has a large range of leaflets that promote water efficiency, the distribution of these may also lead to increased water savings but at present these savings cannot be calculated, but the costs for this year is £31079.50

The calculation of costs due to staffing has been calculated using accepted methodology from the AIR12 return.

Assumed Savings

Household-Water Efficiency Methods	=	0.0368276
Other Water Efficiency Methods	=	0.4794894
Non Household-Water Efficiency Methods	=	0.001518
The total recorded savings are	**=**	**0.517835 Ml/d**

The work of the Education Department has continued to significantly improve NI Water’s water efficiency figure. This can be demonstrated through the behavioural chance activity which has led to our customers becoming more efficient in their use of water and the UKWIR method is now being used to quantify the water saving benefits for “softer measures” (2010 Reporters recommendation 1, (document reference)T1niw.R10 P1 S2).
The UKWIR spreadsheet WR25 “Estimating water saving calculator for baseline water efficiency” has been used. These activities have been apportioned between Medium and High Levels of engagement.
This is summarised in the following table:

Level of Engagement	Ml/day
High	0.958
Medium	0.011
Totals	**0.970**

The increase in the contact with schools through the Waterbus to five days a week (high-level engagement) has ensured the Ml/day increase to 0.479 in comparison to 2015/16 figure of 0.262Ml/day.

Using the UKWIR Methodology, which as previously mentioned was recommended by the Reporter, has resulted in a general improvement in water efficiency measurement for the company.

Year	Assumed Savings
2009/10	0.048 Ml/day
2010/11	0.216 Ml/day
2011/12	0.264 M/l day
2012/13	0.227 M/l day
2013/14	0.219 Ml/day
2014/15	0.304 Ml/day
2015/16	0.299 Ml/day
2016/17	0.517 Ml/day

NI Water concentrated on an increased activity of the Waterbus with over twenty visits per month for the ten school months, which attributes to a higher level of engagement and also a high level of savings for this element.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 2 KEY OUTPUTS
WATER SERVICE - 2 (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	DG2 PROPERTIES RECEIVING PRESSURE/FLOW BELOW REFERENCE LEVEL																				
1	Total connected properties at year end	000	1	818.0	A2	825 0	B2	828.1	A2	839.7	A2	852.4	A2								
2	Properties below reference level at start of year	nr	0	1,748	B3	1,420	B3	1,257	B3	1,082	B3	900	B3								
3	Properties below reference level at end of year	nr	0	1,420	B3	1,257	B3	1,082	B3	900	B3	862	B3								
4	Properties receiving low pressure but excluded from DG2	nr	0	0	B3	0	B3	0	B3	0	B3	0	B3								
4a	DG2 Properties with pressure below a surrogate level of 7.5m at end of year	nr	0	176	B2	169	B2	137	B2	126	B2	124	B2								
4b	DG2 Properties at risk of low pressure removed from the risk register by company action	nr	0	297	B3	132	B3	186	B3	171	B3	40	B3								
4c	Average capex cost of permanent solutions to DG2 problems	£000/prop	1	0.8	C4	9.1	C4	8.2	B2	13.9	B2	26 8	B2								
B	DG3 PROPERTIES AFFECTED BY SUPPLY INTERRUPTIONS																				
	(i) UNPLANNED INTERRUPTIONS																				
5	More than 3 hours	nr	0	53,458	B3	41,412	B3	112,653	B3	105,235	A3	90,094	A3								
6	More than 6 hours	nr	0	10,487	B3	6,742	B3	43,767	B3	8,699	A3	5,128	A3								
7	More than 12 hours	nr	0	2,607	B3	1,195	B3	25,693	B3	841	A3	494	A3								
8	More than 24 hours	nr	0	1,554	B3	12	B3	13,788	B3	32	A3	0	A3								
	(ii) PLANNED AND WARNED INTERRUPTIONS																				
9	More than 3 hours	nr	0	50,096	B3	35,468	B3	47,216	B3	33,929	A3	35,484	A3								
10	More than 6 hours	nr	0	20,674	B3	18,454	B3	19,127	B3	13,767	A3	13,247	A3								
11	More than 12 hours	nr	0	0	B3	0	B3	44	B3	0	A3	0	A3								
12	More than 24 hours	nr	0	0	B3	0	B3	0	B3	0	A3	0	A3								
	(iii) INTERRUPTIONS CAUSED BY THIRD PARTIES																				
13	More than 3 hours	nr	0	1,778	B3	2,452	B3	4,710	B3	4,739	A3	12,691	A3								
14	More than 6 hours	nr	0	561	B3	121	B3	974	B3	476	A3	842	A3								
15	More than 12 hours	nr	0	1	B3	33	B3	1	B3	0	A3	30	A3								
16	More than 24 hours	nr	0	0	B3	0	B3	0	B3	0	A3	0	A3								
	(iv) UNPLANNED INTERRUPTIONS (OVERRUNS OF PLANNED INTERRUPTIONS)																				
17	More than 6 hours	nr	0	311	B3	1,004	B3	2,521	B3	1,141	A3	1,611	A3								
18	More than 12 hours	nr	0	60	B3	20	B3	16	B3	159	A3	417	A3								
19	More than 24 hours	nr	0	0	B3	5	B3	0	B3	140	A3	0	A3								
C	POPULATION																				
20	Population (winter) (total)	000	2	1,842.61	C2	1,850.54	C2	1,862.72	C2	1,874.73	C2	1,887.10	C2								
D	DG4 RESTRICTIONS ON USE OF WATER																				
21	% population - hosepipe restrictions	%	1	0.0	A1	0 0	A1	0.0	A1	0.0	A1	0 0	A1								
22	% population - drought orders	%	1	0.0	A1	0 0	A1	0.0	A1	0.0	A1	0 0	A1								
23	% population - sprinkler/unattended hosepipe restrictions	%	1	0.0	A1	0 0	A1	0.0	A1	0.0	A1	0 0	A1								

Table 2 – Key Outputs - Water Service 2

Line 1- Total Connected Properties at Year End

Northern Ireland Water's (NIW) property data is provided via a data download of the property database tables held within the RapidXtra billing system. The data is then manipulated within Microsoft SQL to produce the Rapid Property Summary Report.

In AIR12 we introduced an automated tool to populate the figures within Table 2 - (Rapid Property Summary as the input). Our methodology for AIR17 has remained consistent.

The difference between the AIR16 and the AIR17 figures is 12689. The breakdown can be explained as follows:

1) New Connections during the 2016/17 reporting year.
2) Added as a result of a customer contact. E.g. septic tank empty request, no water complaint, blocked sewer etc.
3) Removal of duplicates/properties as a result of data quality initiatives
4) The decreased number of properties within the no water/well water category (further detail provided within the Table 7 Commentary)

In addition to the above, other data quality requirements have been built into the new CBC Contract. They cover all aspects of the property life cycle (creating, amending and demolishing properties) and data degradation will be monitored/measured throughout. The work on data validation has commenced, with new validations 'live' as a result of Phase 1 & 2 implementation further validations will be implemented as Phase 3 & 3a during 2016/17 & 2017/18.

Annex A details the Line Methodology followed for each of the figures calculated in Table 2.

Line 2 – Properties below the reference level at start of year

The number of properties on the Register at the start of the year was 900, as reported in line 3 of the AIR16 submission.

Line 3 – Properties below the reference level at end of year

As per the 2017 regulatory guidance, as issued and directed by NIAUR, this line includes properties within a 10m height of service reservoirs, there are currently 84 DG2 properties located within 10m of the supplying SR.
It should be noted that NI Water will not be able to provide such properties with adequate pressure through normal hydraulics; however they will be included in the DG2 register. The final number of properties recognised as being below the reference level at year end is 862.

The year-end figure is the direct result of removals due to Company Action and better information as well additions identified throughout the year. Throughout this process a surrogate pressure of 15m head in the adjacent water main has been adopted as the reference level. All properties removed from the Register during the reporting period are supported by a report and appropriate logged data. The removals process is as per NI Water's methodology and is consistent with previous AIR submissions.

The reductions arising from capital schemes are captured within reports received following the completion of water main rehabilitation or infrastructure improvements. In total NI Water processed 4 DG2 investigation (DIR) reports resulting in 40 properties being

removed from the DG2 register due to company action in AIR17, see Table 1 and scheme summaries below.

Regular updates of DG2 properties continue to be uploaded onto the CARtoMAP system ensuring that this information is readily available throughout the company. This has proved to be of particular benefit to the Contact Centre to assist in the handling of low pressure complaints.

Table 1

Company Action Removal Scheme	DG2 Properties Removed
Ballygowan	22
South Ph1	10
Ballysillan	5
MIMP South	3
Total	**40**

Ballygowan DIR - This scheme covers an area of 123km^2 situated in a predominately rural area east of Carryduff. The work package supplies an estimated 10282 properties and contains 378km of water mains. As a result of work completed, 22 DG2 properties were removed from the register.

South Phase 1 DIR – This work package covers an area of 642km^2 in Co. Fermanagh, is a mixed rural and urban area situated right on the border with Ireland. Property numbers supplied are around 16302 and there is in the region of 959km of water mains length.
Following successful Water mains rehabilitation this allowed the removal of 10 properties from the register.

Ballysillan DIR –The WP94 Ballysillan study boundary is located mainly around the Cavehill region of Belfast encompassing an area of 18km^2. This supplies around 26042 urban properties through 285km of mains. Following successful improvements to the infrastructure in the area a total of 5 properties were successfully removed from the register.

MIMP South DIR –This work package area is around 377km^2, mainly rural, and is located south of Craigavon to Banbridge. It supplies some 42675 properties through 1333km of mains. Following successful Water Mains Rehabilitation in the area a total of 3 properties were successfully removed from the register.

As a result of the relogging in Rasharkin, a total of 4 properties were removed from the register due to better information and which could not be attributed to company action or infrastructure improvements. All removals were processed based on the provision of 7 day logged data. The existing Register maintains links to reports, supporting documentation and location maps, all of which are held electronically. These are identified in Table 2 below and aligned to their corresponding Work Package.

Table 2

Better Information Removals	DG2 Properties Removed
Rasharkin	4
Total	**4**

Rasharkin DIR – We were alerted to 4 properties in the Rasharkin DMA on the Register which could be removed through Better Information. The DMA covers an area of 18km^2 which is mainly rural outside Ballymena Town with water mains of length 42km supplying the area.

There were a number of additions made to the register this year following information received from colleagues regarding a total of 6 properties suffering from low pressure within the Mountjoy DMA. This DMA covers an area of 76km ² and supplies via mains length of 128km.

The total DG2 movements during the year are summarised in Table 3 below.

Table 3

Year Start	**900**
Additions due to Better Information	6
Removals due to Company Action	40
Removals due to Better Information	4
DG2 Properties Remaining	**862**

Line 4 – Properties receiving low pressure but excluded from DG2

As per NIAUR direction, properties within 10m are no longer excluded from the DG2 Register. Therefore there are currently zero properties that are justifiably covered by the exclusions as per the current guidance notes.
It should be noted that NI Water will not be able to provide such properties with adequate pressure through normal hydraulics.

Line 4a – DG2 properties with pressure below a surrogate level of 7.5m at end of year

A query of the DG2 register confirms that 124 properties experience a pressure below the 7.5m surrogate level.

Line 4b – DG2 properties at risk of low pressure removed from the risk register by Company Action

Calculation of the total number of properties removed as a direct result of Company Action is generally achieved by adding the properties identified by removal reports resulting from both Rehabilitation schemes and Infrastructure improvements.

Table 4

Removals Due to Company Action	**Number**
Rehabilitation Schemes	40
Infrastructure Improvements	0
Total	**40**

The final number of properties removed due to Company Action is recorded in Table 4 above as 40. This number alongside an exceedance of 79 on the AIR16 target means that NIW has surpassed the cumulative PC15 Target of 200 by 11.

Lag in Confirming Removal from Register

There is a time lag of approximately one year between the completion of the construction phase of a Work Package and confirmation that properties can be removed from the register, in general. There will be a longer lag in areas where there are multiple phases in

a Work Package under construction, or a neighbouring Work Package that has a significant effect on the normal operation of the system. In general, the PPRA report for a multi-phase Work Package will be completed one year after the final phase of the Work Package is constructed.

Work Packages awaiting PPRA

Documentation listing the Work Packages awaiting the completion of PPRA reports identifies a number of DG2 properties to be removed during 2017/18 using predicted pressure from Hydraulic Modelling. The actual pressure will be confirmed by logging before formal removal of properties from the register. Table 5 below lists the Work Packages and the predicted number of properties identified for removal.

Table 5

Work Package Name	No. of Props to be Removed
South/South East Fermanagh	26
Lisburn South	35
Loughgall	35
Total	**96**

Removals Pending

The total number of properties planned for removal during the 17/18 reporting year from work packages awaiting PPRA is 96. However it should be noted that there were 7 properties identified in Killylane for removal from the register in 16/17 which were not completed as of yet. There were also properties identified in Omagh and Lough Ross, 19 and 31 respectively. All these properties will by necessity move to a later date for removal – these will take the planned removals to 153.

Table 6

Work Packages Outstanding	No. of Props to be Removed
Killylane	7
Omagh	19
Lough Ross	31
Total	**57**

These removals however are subject to the completion of rehabilitation works, collation of pressure data and submission of completed reports.

The cumulative PC15 target going into 17/18 is 357; minus the 11 which had has surpassed that target to date means an AIR18 removal target of 146.

Line 4c - Average Capex cost of permanent solutions to DG2 problems

The Utility Regulator issued guidance in April 2011 for AIR11 Table 2 which included additional reporting lines for average cost of removing DG2 properties from the Register as a result of Company Action.

This is the sixth year that the company has reported this figure and it will allow the benchmarking of NI Water costs. The UR Final Determination Document indicated an average cost per property removed, which appears to be based on historic figures from England and Wales, but the appropriateness of this comparison without a factor to account for the much longer length of main per property in Northern Ireland needs further

discussion. The variability of cost per property removed as outlined in the table below is reflective of the current method of delivery of the Water Mains Rehabilitation Programme. Work packages have multiple drivers and assignment of costs to DG2 removal relies on the use of the Enhancement part of the CIDA allocation for the schemes below rather than directly attributable costs. (Rather than arising from individual projects designed solely to remove DG2 properties.) NIW will continue to develop these reporting lines to deliver a more robust process for attributing costs to DG2 properties.

The scheme costs and number of properties removed from the register are reported for each WP where a PPRA report was produced. The costs are for mains, with the primary justification for rehabilitation listed as “Hydraulic”, which were generally replaced with a larger size of main. These mains may have a secondary structural or water quality driver also but there was no cost reduction for asset maintenance or quality enhancement applied. This matches the approach used for CIDA allocation at CIP A1 stage.

PPRA reports covering Ballysillan, MIMP South, South Phase 1, and Ballygowan were produced during 2016-17 which removed a total of 40 properties from the register. These are detailed in the Table below.

Table 7

WP Title	DG2 Properties Removed	Total Cost	Cost Per Removal
JR441 Ballysillan	5	£9435.15	£1.89K
JI025 MIMP South	3	£60110.01	£20.04K
JP680 South Phase 1	10	£333376.20	£33.34K
JS223 Ballygowan	22	£2333887.60	£27.78K
Carried Forward Surplus from 2015-2016	79		
TOTAL Pro Active NIW DG2 Removals 2016-2017	**119 against 108 target**	**£2736808.96**	
Average Cost per DG2 Removal		**£26831.46**	

(Note on Ballygowan WP : In calculating this figure it has been taken into account that within the Ballygowan WP there have previously been 62 properties removed from the register in addition to the 22 this year and therefore the total scheme cost of £2333887.60 removes 84 properties at an average cost of £27784.38 for Ballygowan alone)

Therefore the average overall cost of removing a DG2 property from the register is obtained by dividing the total cost £2736808.96 by the total number of properties removed (40 for this year plus 62 previously in Ballygowan) utilising the EP Budget. Average removal cost is therefore

Average cost per DG2 removal = £26831.46

The hydraulic models were used to size the replacement mains with a future demand calculated using the 2010 WRS Report. Current practice would use the future model with the current mains to generate future level of service failures and then check that these were resolved by the replacement mains. This gives the modelled future Level of Service (LoS) failures that the mains resolve.

Workpackage Descriptions

Ballysillan JR441

The Ballysillan Work Package is situated around North and West Belfast. It covers an area of 14.34km2 and supplies approx. 21000 properties through 224.8km of water mains.

The work package was designed to rehabilitate 34.1km of water mains and abandon 5.1km of mains.

MIMP South

The MIMP South Work Package was developed after the freeze/thaw period and includes the towns and cities of Newry, Banbridge, Armagh, Craigavon and Dungannon along with the rural areas surrounding them.

The Work Package covers an area of 2702kms. The package was proposed to rehabilitate 26.1km of water mains and abandonment of 2.3km. There are 647 properties on the DG2 Register in this zone but as there were no Hydraulic Schemes within the package it was not envisaged that many would experience an increase in pressure.

South Phase 1

The South Phase 1 Work Package is situated to the North and West of Enniskillen town and including the surrounding environment of Fermanagh.
Currently there 12 properties on the DG2 Register which are all likely to be removed by the rehabilitation work within this package.

WP69 Ballygowan

The Ballygowan and Mid Down zone includes the urban settlements of Ballynahinch, Comber and Crossgar and surrounding rural areas. The Work Package covers an area of 366km2 and supplies approximately 21700 properties through 990km of mains in 25 DMA's.

Further Work Packages to be reviewed next year

A spreadsheet listing the Work Packages awaiting completion of PPRA reports was produced and it identifies the estimated number of DG2 properties to be removed during 2017/18 using predicted pressure from Hydraulic Modelling. The actual pressure will be confirmed by logging before formal removal of properties from the register. The table below lists the Work Packages and the predicted number of properties identified to date for removal.(This may rise with further investigation throughout the year)

Table 8

Work Package Name	No of properties to be removed
Omagh	19
Lough Ross	31
Killylane	7
South/South East Fermanagh	26
Lisburn South	35
Loughgall	35
TOTAL	**153 against 157 target**

Removals Pending

It should be noted that there are currently 153 properties identified for removal from the register in 2017/18 to a target of 157 in the plan following the submission of PPRA Reports.

However the 2016/17 target was for the removal of 108 DG2 properties and the actual achieved removals surpassed this figure leaving 11 DG2 removals necessary to average out the target removal numbers. And so in reality the totals are 153 planned for next year

against a 146 (i.e. 157 – 11) target to get NIW up to the planned cumulative target for end of next year.

These removals are subject to the completion of rehabilitation work, collation of pressure data and submission of completed reports. In previous years, more detailed work throughout the year resulted in more DG2s being delivered than planned .These reviews are ongoing

Confidence Grade Line 4c

The confidence grade for this line has remained at B2 this year this has been achieved by EP, Asset Performance and the Reporter working together to improve the granularity of the returns and to improve the accuracy of the methodology and figures. This was done by making use of the scheme approval analysis that presents the contribution from each of the investment drivers (structural improvements, water quality, operational issues (leakage) and hydraulic drivers (DG2).

Individual scheme outputs are provided separately to show how each calculation was carried out.

Lines 5-19 - DG3 Properties Affected by Supply Interruptions

The rules governing the recording and collation of data for the DG3 Register are explained in the Levels of Service Methodology. DG3 procedures were established and implemented by NI Water in April 2007.

Note: This commentary includes figures based on a Total Connected Properties at Year End figure of 852,399 as confirmed by CSD Services in AIR17 Table 2 Line 1.

Significant year on year changes in reported figures including an explanation of any factors that may have influenced the figures

Unplanned, Unwarned Interruptions

AIR	**DG3 Properties Affected**	**2014/15** Inc. Industrial Action	**2014/15** Exc. Industrial Action	**2015/16**	**2016/17**
Table 2: Line 5	More than 3 hours	112,653	72,859	105,235	**90,094**
Table 2: Line 6	More than 6 hours	43,767	10,243	8,699	**5,128**
Table 2: Line 7	More than 12 hours	25,693	805	841	**494**
Table 2: Line 8	More than 24 hours	13,788	1	32	**0**

This year, all four outturns relating to properties affected by unplanned, unwarned interruptions have reduced.

In 2016/17, 90,094 properties experienced an unplanned, unwarned interruption that lasted more than 3 hours, 15,141 *(14%)* fewer properties than the previous year. As the number of interruption events were very similar (781 in 2015/16 versus 779 in 2016/17), this decrease was mainly due to a reduction in the number of events involving more than 2,000 properties, 6 such events in 2015/16 amounting to 18,011 properties but only 3 such events in 2016/17 amounting to 7,890 properties.

The AIR17 outturn was still more than double the AIR14 outturn of 41,412, the last outturn derived entirely from OMIS data and which was unaffected by extreme or atypical events. This was due in part to the introduction of the Central Incident Management System (CIMS) in July 2014 and associated changes in the processes used to capture the details of supply interruption events.

CIMS has improved the completeness of the annual datasets used to determine the outturns for this measure. The accuracy of the times associated with interruption events has also improved as times are now reported to the nearest minute instead of being rounded up or down to the nearest quarter hour. The accuracy of the number of affected properties per interruption event has improved as Field Managers now have access to tools that enable them to draw their own GIS polygons and determine the property counts. Another reason for the increase in outturn is likely to have been the weekly circulation of 'no water' complaint reports enabling Field Managers to determine more accurately, the times and affected properties associated with each interruption event. This is resulting in the identification of additional properties and longer durations than would possibly have been recorded for historical interruptions.

There may still be a degree of over-counting associated with the property counts of interruption events lasting between 3 hours and 6 hours but the expectancy is that the accuracy will improve as the focus shifts from interruptions with longer durations.

In 2016/17, 5,128 properties experienced an unplanned, unwarned interruption that lasted more than 6 hours, 3,571 *(41%)* fewer properties than the previous year. Performance in October 2016 was particularly poor and when it became apparent that the >6 hour KPI target was in jeopardy, there was a renewed effort to try to minimise the number of unplanned events lasting more than 6 hours during the remainder of 2016/17. This, together with the mild winter weather enabled the target to recover.

DG3 performance has been good this year with all three Key Performance Indicator (KPI) targets achieved. The most significant unplanned interruption event of the year occurred in August 2016 when a planned and warned interruption associated with mains rehabilitation work in Dungannon commenced before the planned start time communicated to customers in advance of the interruption. 446 properties experienced an interruption of more than 6 hours and 147 of those properties went on to experience an interruption of more than 12 hours.

In 2016/17, 494 properties experienced an unplanned, unwarned interruption that lasted more than 12 hours, the lowest outturn for this measure since the 2011/12 outturn of 765.

This year, no properties experienced an unplanned, unwarned interruption that lasted more than 24 hours.

Planned and Warned Interruption Events

DG3 Interruption Events	**2014/15**	**2015/16**	**2016/17**
More than 3 hours	545	289	**450**
More than 6 hours	298	129	**221**
More than 12 hours	1	0	**0**
More than 24 hours	0	0	**0**

The table above relates to annual numbers of properties affected by planned and warned interruption events.

The majority of planned and warned interruption events and the numbers of properties affected by those events continue to be associated with mains rehabilitation. In 2016/17, NI Water carried out a total of 450 planned and warned interruptions lasting more than 3 hours, 332 of which related to the Water Mains Rehabilitation Programme. During the same period, the Company carried out 221 planned and warned interruptions lasting more than 6 hours, 202 of which were associated with mains rehabilitation.

The increase in outturns over the last year is consistent with an increase in the meterage installed under the Water Mains Rehabilitation Programme, i.e. the water main distribution meterage installed in 2016/17 was 163km compared to 112km in 2015/16 and 212km in 2014/15.

Properties Affected by Planned and Warned Interruption Events

AIR	**DG3 Properties Affected**	**2014/15**	**2015/16**	**2016/17**
Table 2: Line 9	More than 3 hours	47,216	33,929	**35,484**
Table 2: Line 10	More than 6 hours	19,127	13,767	**13,247**
Table 2: Line 11	More than 12 hours	44	0	**0**
Table 2: Line 12	More than 24 hours	0	0	**0**

This year, the increase in the overall number of properties affected by NI Water was attributed in part, to the ongoing Water Main Rehabilitation Programme within some densely populated urban areas in early 2016/17. In addition, the reduction in the number of properties affected by planned and warned interruption events for more than 6 hours, reflects the Company's policy to minimise interruption to its customers' water supply.

Time Band		**2014/15**	**2015/16**	**2016/17**
More than 3 hours	Properties	31,852	23,663	**20,828**
	Events	400	188	**332**
	Properties per Event	80	126	**63**
More than 6 hours	Properties	16,308	11,136	**10,119**
	Events	279	106	**202**
	Properties per Event	58	105	**50**

The table above relates to planned and warned interruptions associated with the Water Mains Rehabilitation Programme.

These figures indicate that there has been a consistent decrease in the number of properties affected per interruption event. This is due to continuous improvement in planning, control and reporting of the Water Mains Rehabilitation Programme to minimise interruption to our customers' water supply. In addition, there was an increase in the percentage of work packages carried out in rural areas in the latter half of 2016/17, which increased the overall meterage and affected less properties per length of main, due to the lower density of properties within these areas.

For the second year in succession, no properties experienced a planned and warned interruption lasting more than 12 hours. Whenever possible, NI Water tries to avoid planned and warned interruptions exceeding 12 hours.

No properties have been affected by a planned and warned interruption lasting more than 24 hours since the Company began making regulatory returns in 2007/08.

Interruptions caused by Third Parties

AIR	DG3 Properties Affected	2014/15	2015/16	2016/17
Table 2: Line 13	More than 3 hours	4,710	4,739	**12,691**
Table 2: Line 14	More than 6 hours	974	476	**842**
Table 2: Line 15	More than 12 hours	1	0	**30**
Table 2: Line 16	More than 24 hours	0	0	**0**

This year has seen a sharp rise in the number of properties affected by an unplanned interruption caused by a third party lasting more than 3 hours. The number of events informing this measure has also risen, 42 in 2016/17 compared to 25 in 2014/15 and 34 in 2015/16. This increase may have been attributed to an increase in the quantity of work being undertaken by third parties.

Two events in the year involved more than 2,000 properties, accounting for 5,918 properties *(47%)* of the outturn. The most significant event occurred on 22 February 2017 when a damaged main in Banbridge affected supplies to 3,342 properties in Drumnahare Town Outlet DMA.

The AIR17 outturn for properties affected by an unplanned interruption lasting more than 6 hours caused by a third party was 366 properties *(77%)* higher than the AIR16 outturn. The associated number of events was 6 in 2016/17 compared to 5 in 2014/15 and 11 in 2015/16. The most significant event occurred in September 16 when a damaged main caused an interruption to 464 properties in Kells.

In 2016/17, 30 properties experienced an unplanned interruption lasting more than 12 hours caused by a third party. Two events were responsible, both involving damage to the Company's mains. The first event occurred in April 16 and involved 19 properties in Kircubbin. The second event occurred in August and involved 11 properties in Crumlin.

For the sixth year in succession, no properties experienced an unplanned interruption lasting more than 24 hours caused by a third party.

Unplanned Interruptions (Overruns of Planned Interruptions)

AIR	DG3 Properties Affected	2014/15	2015/16	2016/17
Table 2: Line 17	More than 6 hours	2,521	1,141	**1,611**
Table 2: Line 18	More than 12 hours	16	159	**417**
Table 2: Line 19	More than 24 hours	0	140	**0**

This year, the outturn number of properties affected by an overrun of a planned and warned interruption lasting more than 6 hours, increased by 470 properties *(41%)*. There was a similar percentage increase in the number of interruption events informing this measure, 12 in 2015/16 compared to 18 in 2016/17.

	2014/15			2015/16			**2016/17**		
	Planned >6hrs	Planned Which Overran	%	Planned >6hrs	Planned Which Overran	%	**Planned >6hrs**	**Planned Which Overran**	**%**
Events	314	16	5.10	141	12	8.51	**238**	**18**	**7.14**
Properties	21,648	2,521	11.65	14,908	1,141	7.65	**14,858**	**1,611**	**10.84**

The table above provides a summary of the outturn numbers of planned and warned interruption events in the last 3 years, including those that overran and the corresponding numbers of affected properties. The change in outturns reflects a rise in the overall number of planned and warned interruptions, including those associated with mains rehabilitation.

In 2016/17, 1,611 properties experienced an overrun of a planned and warned interruption lasting more than 6 hours. Eighteen events were responsible, the most significant of which occurred on 2 August 16 when a planned and warned interruption associated with mains rehabilitation work overran. 1,076 properties in Dungannon experienced an overrun as a result of the incident although only 630 properties, those within Eglish DMA are included in the outturn for Table 2 Line 17. For the remaining 446 properties, the interruption commenced before the planned start time communicated to customers in advance of the interruption and those properties are therefore included in the outturn for Table 2 Line 6.

In 2016/17, 417 properties experienced an overrun of a planned and warned interruption lasting more than 12 hours. Two events were responsible, the most significant of which is described above. Of the 536 properties that experienced an overrun as a result of the incident, 389 properties are included in the outturn for Table 2 Line 18. The remaining 147 properties were interrupted from before the planned start time and are included in the outturn for Table 2 Line 7.

This year, no properties experienced an overrun of a planned and warned interruption lasting more than 24 hours.

Additional information on performance against alternative standards

NI Water has three Key Performance Indicators relating to Supply Interruptions (DG3):-

Number of properties experiencing unplanned, unwarned interruptions (expressed as a percentage of households) in excess of:
1a) 6 hours, 1b) 12 hours, 1c) 24 hours. KPIs 1a and 1c were first introduced in April 2007.

The following table provides details of the outturns for the last three years together with the corresponding yearend targets.

Interrupt Category	14/15 Outturn Inc. Industrial Action		14/15 Outturn Exc. Industrial Action		14/15 KPI Target		15/16 Outturn		15/16 KPI Target		**16/17 Outturn**		**16/17 KPI Target**	
	(Props)	(%)	(Props)	(%)	(Props)	(%)	(Props)	(%)	(Props)	(%)	**(Props)**	**(%)**	**(Props)**	**(%)**
>6 hrs	43,767	5.285	10,243	1.237	7,273	0.88	8,699	1.04	7,223	0.860	**5,128**	**0.602**	**7,148**	**0.839**
>12 hrs	25,693	3.103	805	0.097	1,550	0.19	841	0.10	1,500	0.179	**494**	**0.058**	**1,450**	**0.170**
>24 hrs	13,788	1.665	1	0.000	80	0.01	32	0.004	80	0.010	**0**	**0.000**	**80**	**0.009**

Note 1: Percentage outturns are based on total connected properties as follows: 828,060 (AIR15); 839,710 (AIR16); 852,399 (AIR17)

The yearend outturns for properties affected by unplanned, unwarned interruptions confirm that NI Water achieved all three DG3 KPI targets. The >6hr outturn of 0.602% (5,128 properties) was 0.237% (2,016 properties) within the full year target. The >12hr outturn of 0.058% (494 properties) was 0.112% (956 properties) within the full year target. No properties experienced an unplanned interruption lasting more than 24 hours in 2016/17.

In 2015/16, the DG3 >6hr KPI target was missed. There were a number of contributory factors including a trunk main burst in November which was difficult to locate and repair due to poor weather conditions and health and safety considerations. In January, there were a number of difficult repairs in rural areas with no options to rezone.

In 2014/15, all three DG3 KPI targets were missed. Target failure was largely attributed to the period of industrial action in December and January although the Company would still have failed its >6hr target because of a non-visible burst main in Londonderry on 15 August, a burst main in Coleraine with limited rezoning opportunities on 20 November, and a delayed response by the repair contractor to a burst main in Gilford on 6 February.

Properties which suffered an interruption to supply where NI Water considers that customers would not have noticed the loss of service, for example because it occurred at night

Assumption: For the purposes of reporting on this requirement of the commentary, NI Water has considered only those interruptions lasting longer than 3 hours and has assumed that 'night' falls between the hours of 12 midnight and 7am.

The following table provides a summary of those interruption records in 2016/17 whose Interruption Start Date/Time and Supply Restored Date/Time fell within the hours of 12 midnight and 7am.

Interrupt Type	Interrupt No.	Interruption Start		Supply Restored		Duration (Hours)	Properties Affected		
		Date	Time	Date	Time		>0hrs	>3hrs	>6hrs
Unplanned	Event 66257; DG3 45494	02/04/16	00:20	02/04/16	05:00	4 Hrs 40 Mins	121	121	0
Unplanned	Event 76548; DG3 45769	12/05/16	00:22	12/05/16	05:00	4 Hrs 38 Mins	23	23	0
Unplanned	Event 76833; DG3 46041	15/06/16	00:30	15/06/16	05:30	5 Hrs 0 Mins	6	6	0
Unplanned	Event 97369; DG3 66550	18/08/16	02:30	18/08/16	06:00	3 Hrs 30 Mins	30	30	0
Planned & Warned	EP027	09/10/16	00:01	09/10/16	04:30	4 Hrs 29 Mins	1,925	1,925	0
Unplanned	Event 107789; DG3 76922	03/10/16	00:05	03/10/16	06:00	5 Hrs 55 Mins	97	97	0
Unplanned	Event 139235; DG3 108069	12/02/17	00:07	12/02/17	04:10	4 Hrs 3 Mins	3	3	0
Unplanned	Event 139659; DG3 108407	23/03/17	00:30	23/03/17	04:15	3 Hrs 45 Mins	258	258	0

Both Customer Field Services and the Leakage function are responsible for interruptions to supply that are of a relatively short duration. Interruptions lasting less than 1 hour are not, as a rule, recorded by NI Water. Routine step tests are carried out at night to reduce the impact of loss of supply to customers and normally last no longer than 3 hours.

7 unplanned interruption records and 1 planned and warned interruption record have been identified where customers would not have noticed the loss of service because it occurred at night. All 8 of the interruptions lasted 6 hours or less. The number of properties affected by unplanned interruptions was 538 representing 0.60% of the total number of properties that experienced an unplanned interruption lasting more than 3 hours in 2016/17. The number of properties affected by planned and warned interruptions was 1,925 representing 5.42% of the total number of properties that experienced a planned and warned interruption lasting more than 3 hours in 2016/17.

Unplanned: (538 / 90,094) x 100 = **0.60%**
Planned and Warned: (1,925 / 35,484) x 100 = **5.42%**

NI Water reported in its AIR16 commentary that there were 4 unplanned interruptions and 2 planned and warned interruptions where customers would not have noticed the loss of service because it occurred at night. The number of properties affected by unplanned interruptions was 4,687 representing 4.5% of the total number of properties experiencing unplanned interruptions lasting more than 3 hours in 2015/16. The number of properties

affected by planned and warned interruptions was 215, representing 0.6% of the total number of properties experiencing planned and warned interruptions lasting more than 3 hours in 2015/16.

Number of overruns of planned and warned interruptions lasting between 3 and 6 hours

The following table provides a summary of the 10 overruns of planned and warned interruptions lasting between 3 and 6 hours in 2016/17.

	Interrupt. No.	Month	Duration (hrs)	Properties Affected		Duration Of Overrun (hrs)
				> 0 hrs	> 3 hrs	
1	Event 76755; DG3 ID 45970	Jun 16	4 Hrs 30 Mins	41	41	0 Hrs 30 Mins
2	EP019	Jun 16	5 Hrs 50 Mins	9	9	1 Hr 30 Mins
3	EP024	Aug 16	5 Hrs 0 Mins	430	5	2 Hrs 0 Mins
4	Event 107698; DG3 ID 76839	Sep 16	3 Hrs 50 Mins	117	117	0 Hrs 30 Mins
5	EP026	Nov 16	5 Hrs 55 Mins	24	24	0 Hrs 55 Mins
6	Event 128815; DG3 ID 97749	Jan 17	3 Hrs 30 Mins	30	30	0 Hrs 30 Mins
7	Event 128949; DG3 ID 107864	Jan 17	4 Hrs 15 Mins	28	28	1 Hr 45 Mins
8	Event 139165; DG3 ID 108015	Feb 17	4 Hrs 40 Mins	9	9	0 Hrs 40 Mins
9	Event 139358; DG3 ID 108176	Feb 17	4 Hrs 50 Mins	24	24	0 Hrs 20 Mins
10	Event 139107; DG3 ID 107971	Feb 17	6 Hrs 0 Mins	11	11	0 Hrs 30 Mins

In 2016/17, there were 10 overruns of planned and warned interruptions lasting between 3 and 6 hours. The number of properties affected by these interruptions was:
41 + 9 + 5 + 117 + 24 + 30 + 28 + 9 + 24 + 11 = **298**

This number is small compared to the number of properties that experienced a planned and warned interruption of between 3 and 6 hours (22,237).

T2: L9 = 35,484; T2: L10 = 13,247; 35,484 - 13,247 = **22,237**

NI Water reported in its AIR16 commentary that there were 11 overruns of planned and warned interruptions lasting between 3 and 6 hours. The number of properties affected by these overruns was 1,159.

Number of properties affected by interruptions caused by loss of electrical supply

InterruptNo.	Date of Incident	Duration (Hours)	Properties Affected						Comments
			> 0 Hrs	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs	Interruption Type	
Event 66203; DG3 ID 45443	06/04/16	9 Hrs 47 Mins	6	6	6	0	0	Unplanned, Unwarned	Electricity supply failure
		5 Hrs 58 Mins	77	77	0	0	0		
Event 76662; DG3 ID 45883	25/05/16	5 Hrs 27 Mins	82	82	0	0	0	Unplanned, Unwarned	Electricity supply failure
Event 76678; DG3 ID 45892	30/05/16	4 Hrs 0 Mins	85	85	0	0	0	Unplanned, Unwarned	Electricity supply failure

InterruptNo.	Date of Incident	Duration (Hours)	Properties Affected						Comments
			> 0 Hrs	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs	Interruption Type	
Event 76726; DG3 ID 45937	04/06/16	4 Hrs 44 Mins	37	37	0	0	0	Unplanned, Unwarned	Electricity supply failure
Event 76847; DG3 ID 46058	16/06/16	3 Hrs 39 Mins	1,318	1,318	0	0	0	Unplanned, Unwarned	Power blip – generator did not start
Event 76892; DG3 ID 46095	18/06/16	3 Hrs 30 Mins	80	80	0	0	0	Unplanned, Unwarned	Electricity supply failure
Event 77224; DG3 ID 46406	01/08/16	6 Hrs 12 Mins	1	1	1	0	0	Unplanned, Unwarned	Electricity supply failure
		5 Hrs 48 Mins	329	329	0	0	0		
Event 87288; DG3 ID 56470	07/08/16	4 Hrs 30 Mins	48	48	0	0	0	Unplanned, Unwarned	Electricity supply failure
Event 97570; DG3 ID 66723	09/09/16	3 Hrs 21 Mins	76	76	0	0	0	Unplanned, Unwarned	Electricity supply failure
Event 107699; DG3 ID 76843	22/09/16	4 Hrs 43 Mins	135	135	0	0	0	Unplanned, Unwarned	Electricity supply failure
Event 107927; DG3 ID 77040	14/10/16	7 Hrs 34 Mins	35	35	35	0	0	Unplanned, Unwarned	Electricity supply failure
Event 118364; DG3 ID 87399	23/11/16	6 Hrs 4 Mins	21	21	21	0	0	Unplanned, Unwarned	Electricity supply failure
		5 Hrs 37 Mins	11	11	0	0	0		
Event 128766; DG3 ID 97701	01/01/17	4 Hrs 53 Mins	17	17	0	0	0	Unplanned, Unwarned	Electricity supply failure
Event 139281; DG3 ID 108102	15/02/17	3 Hrs 24 Mins	334	334	0	0	0	Unplanned, Unwarned	Contractor hit conductors which caused loss of power to Redhills WPS
Event 139330; DG3 ID 108146	17/02/17	3 Hrs 30 Mins	430	430	0	0	0	Unplanned, Unwarned	Power blip – pumps did not start
Event 159714; DG3 ID 118438	28/03/17	5 Hrs 30 Mins	356	356	0	0	0	Unplanned, Unwarned	NIE generator down at Finnis WPS

Number of properties affected by interruptions caused by loss of electrical supply

The table on the previous page provides a summary of the 16 records in 2016/17 relating to unplanned, unwarned water supply interruptions caused by electricity supply failures/power blips and lasting more than 3 hours.

No incidents were of particular significance in terms of duration and no properties experienced an interruption of more than 12 hours. The most significant incident in terms of numbers of properties affected was when a power blip on 16 June caused 1,318 properties in Dungannon to lose their water supply for 3 hours 39 minutes.

Percentage impact of interruptions caused by loss of electrical supply on annual outturns

	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs
Number of Properties Affected by Unplanned, Unwarned Water Supply Interruptions caused by Electricity Supply Failures/Power Blips	3,478	63	0	0
Number of Properties Affected by Unplanned Interruptions	90,094	5,128	494	0
Percentage Impact	3.86%	1.23%	0.00%	0.00%

The impact of the electricity supply failures was greatest on the >3hr outturn, accounting for 3.86% of the total number of properties affected by unplanned interruptions.

Percentage impact of interruptions caused by loss of electrical supply on target compliance

	> 6 Hrs	> 12 Hrs	> 24 Hrs
Percentage of Connected Properties Affected by Electricity Supply Failures/Power Blips	0.007%	0.000%	0.000%
KPI Target	0.839%	0.170%	0.009%
Percentage of Annual Target	0.881%	0.000%	0.000%

The impact of the electricity supply failures/power blips was greatest on >6hr KPI target compliance, amounting to 0.881% of the annual target.

Major incidents during the report year that NI Water believes adversely affected its DG3 performance

The following table provides a summary of the 46 supply interruption incidents during 2016/17 that lasted more than 3 hours and were mentioned in the Company's Upward Reports. *For full details of these incidents, please refer to the Upward Reports.*

Ref	Interrupt No.	Date	Description of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Cat
001	Event 56159; DG3 35411	01/04/16	Burst on 400mm inlet trunk main from Altnahinch WTW to Craig Park SR, [redacted] Ballymoney	5 Hrs 50 Mins	27	27	0	0	0	3
002	Event 66207; DG3 45460	07/04/16	Burst main, [redacted], Rousky, Aughnacloy	14 Hrs 28 Mins	2	2	2	2	0	3
				9 Hrs 58 Mins	21	21	21	0	0	
				4 Hrs 28 Mins	5	5	0	0	0	
003	Event 66222; DG3 45462	08/04/16	Burst on outlet pumping main from Tullyvar WPS, [redacted] Ballygawley (Tullyvar Pump Loughans DMA)	4 Hrs 13 Mins	305	305	0	0	0	3
	Event 66224; DG3 45463		Burst main, [redacted] Aughnacloy	1 Hr 13 Mins	14	0	0	0	0	
004	Event 66292; DG3 45536	15/04/16	Burst 12" main caused by third party, [redacted] Kircubbin *(Cloughy DMA)*	Varies - Max 12 Hrs 38 Mins	452	416	304	19	0	3
005	Event 76529; DG3 45766	11/05/16	Burst on 8" inlet trunk main to Lisnagardy SR, [redacted] Fintona	10 Hrs 2 Mins	8	8	8	0	0	3
006	Event 76548; DG3 45769	12/05/16	Burst 9" main, [redacted] Brookeborough	4 Hrs 38 Mins	23	23	0	0	0	3
007	**Event 76596; DG3 45818**	**19/05/16**	**Burst 4" main, [redacted] Plumbridge *(Cranagh DMA)***	**9 Hrs 36 Mins**	**196**	**196**	**196**	**0**	**0**	**3**
008	Event 76820; DG3 46033	14/06/16	Burst on 12" outlet trunk main from Sampson's Stone SR, [redacted] Ballynahinch	5 Hrs 50 Mins	284	284	0	0	0	3
009	Event 76889; DG3 46183	18/06/16	Telemetry failure resulted failure of Aughalislone WPS to pump to Boomer's Hill SR, [redacted] Lisburn	Varies – Max 10 Hrs 2 Mins	145	139	77	0	0	3
010	Event 76963; DG3 46159	25/06/16	Burst main, [redacted] Newry *(Tullymurray DMA)*	5 Hrs 53 Mins	42	42	0	0	0	3
011	Event 77071; DG3 46271	10/07/16	Burst on 6" outlet main from Glenlough SR, [redacted] Ballymoney	5 Hrs 30 Mins	270	270	0	0	0	3
012	Event 77163; DG3 46361	24/07/16	Pump equipment failure at Ballygomartin SR caused Whiterock Upper SR to go to empty, [redacted] Belfast [redacted]	Varies – Max 12 Hrs 2 Mins	1,119	953	185	19	0	3
013	**Event 87236; DG3 56434**	**02/08/16**	**Early start of planned interruption associated with mains rehabilitation, [redacted] Dungannon**	**21 Hrs 22 Mins**	**54**	**54**	**54**	**54**	**0**	**3**

Ref	Interrupt No.	Date	Description of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Cat
				17 Hrs 12 Mins	**23**	**23**	**23**	**23**	**0**	
	Event 97580; DG3 66741		**Overrun of planned and warned interruption associated with mains rehabilitation. Overrun caused by airlock on outlet main from Mullaghanagh SR, [redacted] Dungannon *(Eglish DMA)***	**Varies – Max 18 Hrs 0 Mins**	**630**	**630**	**630**	**389**	**0**	
	Event 97581; DG3 66742		**Early start of planned interruption associated with mains rehabilitation, [redacted] Dungannon *(Mullaghanagh Blacklough DMA)***	**16 Hrs 47 Mins**	**64**	**64**	**64**	**64**	**0**	
				14 Hrs 17 Mins	**6**	**6**	**6**	**6**	**0**	
				10 Hrs 47 Mins	**299**	**299**	**299**	**0**	**0**	
014	Event 97353; DG3 66539	16/08/16	Burst main, [redacted] Dungannon	3 Hrs 15 Mins	25	25	0	0	0	3
015	Event 97391; DG3 66738	21/08/16	Burst main, [redacted] Antrim	5 Hrs 11 Mins	35	35	0	0	0	3
016	Event 97430; DG3 66605	25/08/16	Pump equipment failure, [redacted] Clogher	3 Hrs 15 Mins	22	22	0	0	0	P
017	Event 97503; DG3 66734	03/09/16	Burst 8" main, [redacted], Kells (Craigstown DMA)	3 Hrs 30 Mins	47	47	0	0	0	3
018	Event 97604; DG3 66770	14/09/16	Burst 6" main, [redacted], Kells	11 Hrs 25 Mins	263	263	263	0	0	2
019	Event 107717; DG3 76860	24/09/16	Burst on outlet trunk main from Mulloughbuoy SR to Moneymore SR, [redacted], Magherafelt	6 Hrs 48 Mins	20	20	20	0	0	3
020	Event 107745; DG3 76888	27/09/16	Burst 560mm trunk main, [redacted], Antrim	3 Hrs 6 Mins	5	5	0	0	0	3
021	Event 107769; DG3 76909	29/09/16	Burst 6" main, [redacted], Dungannon (Killeeshill DMA)	3 Hrs 30 Mins	6	6	0	0	0	3
022	**Event 107781; DG3 87140**	**01/10/16**	**Burst main [redacted] / [redacted] Ballyclare (Craigstown DMA)**	**8 Hrs 12 Mins**	**419**	**419**	**419**	**0**	**0**	**2**
023	Event 107786; DG3 76919	02/10/16	Burst 3" main, [redacted], Newtownards	4 Hrs 45 Mins	1	1	0	0	0	3
				4 Hrs 44 Mins	7	7	0	0	0	
024	Event 107785; DG3 76920	02/10/16	Burst main, [redacted], Castlereagh (Garland Green DMA)	5 Hrs 41 Mins	73	73	0	0	0	3
025	Event 107787; DG3 76921	02/10/16	Burst main, [redacted], Londonderry	Varies – Max 4 Hrs 35 Mins	288	215	0	0	0	3
026	Event 107792 DG3 76927	04/10/16	Burst main, [redacted] Desertmartin (Cullion DMA)	6 Hrs 37 Mins	16	16	16	0	0	3
	Event 107802; DG3 76930			5 Hrs 10 Mins	154	154	0	0	0	

Ref	Interrupt No.	Date	Description of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Cat
	Event 107803; DG3 76940			2 Hrs 10 Mins	154	0	0	0	0	
027	Event 107930; DG3 87141	15/10/16	Burst on inlet main to Croaghmore SR, Bushmills	5 Hrs 57 Mins	21	21	0	0	0	3
028	Event 107938; DG3 87142	16/10/16	Burst main, [redacted], Ballyclare (Killylane Glenburn DMA)	5 Hrs 10 Mins	637	637	0	0	0	3
029	Event 107950 DG3 77079	17/10/16	Burst main, [redacted], Donaghadee (Portavoe Donaghadee DMA)	16 Hrs 44 Mins	7	7	7	7	0	3
				7 Hrs 48 Mins	1	1	1	0	0	
	Event 107955 DG3 77072			5 Hrs 11 Mins	1,782	1,782	0	0	0	
				5 Hrs 2 Mins	2,829	2,829	0	0	0	
	Event 107966 DG3 77083			4 Hrs 55 Mins	22	22	0	0	0	
				4 Hrs 53 Mins	4	4	0	0	0	
				4 Hrs 42 Mins	102	102	0	0	0	
030	Event 107957 DG3 77067	19/10/16	Burst mains, [redacted], Annalong	4 Hrs 30 Mins	318	318	0	0	0	3
	Event 107962 DG3 77077			2 Hrs 0 Mins	482	0	0	0	0	
031	Event 118079; DG3 87180	30/10/16	Burst 12” main, [redacted], Belfast	Varies – Max 5 Hrs 45 Mins	1,138	766	0	0	0	3
	Event 118099; DG3 87189			Varies – Max 7 Hrs 6 Mins	652	487	97	0	0	
032	Event 118139; DG3 87220	05/11/16	Burst on outlet of Lettermire SR ([redacted])	4 Hrs 40 Mins	63	63	0	0	0	3
				1 Hr 40 Mins	194	0	0	0	0	
033	Event 118205; DG3 87462	11/11/16	Burst main, [redacted], Newtownards	5 Hrs 43 Mins	53	53	0	0	0	P
				5 Hrs 18 Mins	132	132	0	0	0	
				4 Hrs 43 Mins	252	252	0	0	0	
034	Event 118234; DG3 87296	15/11/16	Burst main, [redacted], Lisburn	5 Hrs 30 Mins	94	94	0	0	0	3
035	Event 118243; DG3 87307	14/11/16	Burst trunk main caused by third party contractor, [redacted], Londonderry	4 Hrs 29 Mins	1,016	1,016	0	0	0	3
036	Event 118262; DG3 87320	15/11/16	Burst main, [redacted], Downpatrick	3 Hrs 45 Mins	102	102	0	0	0	3
037	Event 118324; DG3 87371	21/11/16	Burst main, [redacted] Armagh	3 Hrs 41 Mins	1,845	1,845	0	0	0	3

Ref	Interrupt No.	Date	Description of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Cat
038	Event 118424; DG3 87442	27/11/16	Burst main, [redacted], Larne	7 Hrs 46 Mins	13	13	13	0	0	3
				5 Hrs 26 Mins	62	62	0	0	0	
039	Event 118557; DG3 87553	07/12/16	Burst trunk main, [redacted] Strabane *(Woodend Ballymagorry, Woodend Strabane and Woodend Donemana DMAs)*	5 Hrs 13 Mins	1,822	1,822	0	0	0	3
040	Event 128670; DG3 97636	18/12/16	Burst main, [redacted] Moneyreagh *(Knockbracken Crossnacreevy DMA)*	Varies – Max 5 Hrs 50 Mins	516	349	0	0	0	3
041	Event 128701; DG3 97651	22/12/16	Number of burst mains in Belfast City Centre [redacted]	10 Hrs 30 Mins	2	2	2	0	0	3
	Event 128703; DG3 97652			4 Hrs 19 Mins	294	294	0	0	0	
	Event 128704; DG3 97653			3 Hrs 15 Mins	38	38	0	0	0	
042	Event 128790; DG3 97719	06/01/17	Burst main at [redacted], Ballymena *(Kirkinriola DMA)*	4 Hrs 30 Mins	1,659	1,659	0	0	0	3
043	Event 128813; DG3 97741	08/01/17	Burst main, [redacted], Belfast	3 Hrs 41 Mins	344	344	0	0	0	3
044	Event 139184; DG3 108032	08/02/17	Burst main, [redacted] Hillsborough *(Legacurry DMA)*	4 Hrs 56 Mins	307	307	0	0	0	3
045	Event 139303; DG3 108134	16/02/17	Burst main, [redacted] Richhill	11 Hrs 10 Mins	23	23	23	0	0	P
046	Event 139444; DG3 108241	28/02/17	Burst main, [redacted] Coagh *(Kinksmills Coagh, Kingsmills Dromore and Trunk Kingsmills Brigh DMAs)*	4 Hrs 20 Mins	624	624	0	0	0	3

NI Water assumes a monthly target allowance of one seventeenth of the yearend target from April to October and a monthly target allowance of two seventeenths of the yearend target from November to March. The allowance is doubled from November to March to account for freeze-thaw conditions and an associated rise in the numbers of bursts.The 2016/17 KPI targets are listed below as percentages and numbers of total connected properties, together with the corresponding monthly target allowances.

KPI	2016/17 Target		Monthly Target Allowance			
			Apr to Oct		Nov to Mar	
	%	Properties	%	Properties	%	Properties
>6hrs	0.839	7,148	0.049	420	0.099	841
>12hrs	0.170	1,450	0.010	85	0.020	171
>24hrs	0.009	80	0.001	5	0.001	9

In order to determine the unplanned interruption events that had the greatest negative impact on performance in 2016/17, the Company compared the monthly actuals with the three KPI target profiles and identified **7** instances where a target was exceeded. These instances are highlighted in bold text in the table below.

		May	Jun	Aug	Oct
>6 hour	Actual	**881**	**633**	**470**	**1,529**
	Target	420	420	420	420
>12 hour	Actual	0	**87**	**147**	**120**
	Target	85	85	85	85
>24 hour	Actual	0	0	0	0
	Target	5	5	5	5

The Company then reviewed its DG3 Register and identified the 7 incidents responsible for the underperformance. The incidents are summarised below.

Major Incidents

In May 2016, the >6hr in-month actual was 881 properties compared to an in-month target of 420. May's underperformance was attributed to two separate incidents involving burst mains. The incidents are described below.

Burst main, [redacted] Newtownstewart

Ref: CIMS Event ID 66448; DG3 ID 45671

The first incident related to a burst main at [redacted] Newtownstewart on 1st May. As a result of this incident, 300 properties experienced an unplanned interruption of 8 hours 40 minutes.

The impact of this incident in terms of percentages of connected properties affected was 0.035% >6hrs.

Burst main, [redacted], Plumbridge

Refs: CIMS Event ID 76596; DG3 ID 45818

The second incident related to a burst main at [redacted], Plumbridge on 19th May. As a result of this incident, 196 properties experienced an unplanned interruption of 9 hours 36 minutes. This incident was the subject of Upward Report 007.

The impact of this incident in terms of percentages of connected properties affected was 0.023% >6hrs.

Burst main, [redacted] Downpatrick

Ref: CIMS Event ID 76821; DG3 ID 46038

In June 2016, the >6hr in-month actual was 633 properties compared to an in-month target of 420. The >12hr in-month actual was 87 compared to an in-month target of 85. June's underperformance was attributed to a burst main at [redacted], Downpatrick on 14th June. As a result of this incident, 376 properties experienced an unplanned interruption of more than 6 hours, 87 of which went on to experience an unplanned interruption of more than 12 hours. A further 282 properties experienced an unplanned interruption of 6 hours or less.

The impact of this incident in terms of percentages of connected properties affected was 0.044% >6hrs and 0.010% >12hrs.

Early start of planned and warned interruption, [redacted] Dungannon

Refs: CIMS Event 97580; DG3 ID 66741 – Eglish DMA – Overrun of planned and warned (630, 389, 0)
CIMS Event 87236; DG3 ID 56434 – Mullaghdrolly DMA – Unplanned (77, 77, 0)
CIMS Event 97581; DG3 ID 66742) – Mullaghanagh Blacklough DMA – Unplanned (369, 70, 0)
In August 2016, the >6hr in-month actual was 470 properties compared to an in-month target of 420. The >12hr in-month actual was 147 properties compared to an in-month target of 85.
August's underperformance was attributed to a planned and warned interruption associated with mains rehabilitation work that, for properties in two out of three DMAs affected, started before the planned start time communicated to customers in advance of the interruption. Regrettably, the interruption also overran and the early start meant that for properties in Mullaghdrolly and Mullaghanagh Blacklough DMAs, the interruption could not be categorised as an overrun of a planned and warned interruption. Instead, it had to be categorised as an unplanned interruption for the purposes of reporting. Only properties in Eglish DMA experienced an overrun of a planned and warned interruption. This incident was the subject of Upward Report 013.
The impact of this incident in terms of percentages of connected properties affected was 0.052% >6hrs and 0.017% >12hrs.

In October 2016, the >6hr in-month actual was 1,529 properties compared to a target of 420. The >12hr in-month actual was 120 compared to an in-month target of 85. October's underperformance was attributed to three separate incidents involving burst mains. The incidents are described below.

Burst main, [redacted], Kells

CIMS Event ID 107781; DG3 ID 87140
The first incident related to a burst main at [redacted], Kells on 1st October. As a result of this incident, 419 properties experienced an unplanned interruption of 8 hours 12 minutes. This incident was the subject of Upward Report 022.
The impact of this incident in terms of percentages of connected properties affected was 0.049% >6hrs.

Burst Main, [redacted], Ballymoney

Ref: CIMS Event ID 107959; DG3 ID 77074
The second incident related to a burst main at [redacted], Ballymoney on 18th October. As a result of this incident, 338 properties experienced an unplanned interruption of between 6 hours 15 minutes and 8 hours 50 minutes. A further 547 properties experienced an unplanned interruption of less than 6 hours.
The impact of this incident in terms of percentages of connected properties affected was 0.040% >6hrs.

Burst main, [redacted], Fintona

CIMS Event ID 118016; DG3 ID 87119
The third incident related to a burst main at [redacted], Fintona on 23rd October. As a result of this incident, 291 properties experienced an unplanned interruption of 7 hours 8 minutes.
The impact of this incident in terms of percentages of connected properties affected was 0.034% >6hrs.

Justification of the assigned confidence grades including an explanation for any changes in confidence grades from previous years

The AIR09 Reporter recommended the use of consistent confidence grades across all lines relating to DG3. Last year, NI Water increased its DG3 confidence grade from 'B3' to 'A3' because 2015/16 was the first full year in which the Central Management Information System (CIMS) had been used by the Company in place of the Operations Management Information System (OMIS) to capture data relating to supply interruptions. The new system has now captured two complete years' worth of data and again, the decision has been taken to assign a confidence grade of 'A3' across all lines relating to DG3.

In September 2016, the Company tested and implemented an updated version of CIMS, the first major update of the system since its launch on 4 July 2014. The modifications have improved the usability and functionality of the system and are enabling more time to be spent on improving the accuracy of the information.

CIMS is currently undergoing a further series of upgrades and later this year, the system is set to be renamed 'Inform'.

Justification of Reliability Band 'A'

CIMS is regarded as a better system than OMIS and has the following benefits:

- Improved customer response times
- Improved consistency of methodology across all work streams
- Improved accuracy of information through:
    - the recording of start times by Work Controllers/Telemetry Operators
    - the recording of individual start and restoration times for each property as opposed to each event
    - the recording of times to the nearest minute
- Improved utilisation of other key systems e.g. the GIS as a source of address information
- Improved auditability of information through query, change and approval status tracking
- Better management of approval chains through the automatic generation of e-mailed reminders
- Improved report generation
- Improved accessibility and sharing of information across the business
- Enhanced effectiveness of the DG3 Register through the capture of additional information such as pipe material and diameter and the GIS co-ordinates of bursts

CIMS is working exactly as it should by ensuring the capture of a greater number of interruption events and a greater number of affected properties associated with those events. All interruption events are fully documented to a consistent standard. Every interruption record includes the category, cause, key dates and times, address details, and property counts necessary to meet the regulatory reporting requirements of a DG3 Register. The cause of interruptions is identified by experienced field staff or contractors.

Justification of Accuracy Band '3'

A relationship exists between the number of properties affected by a supply interruption event and the number of 'no water' complaints received, with more affected properties than complaints because not everyone complains.

In 2015, the Company looked at a sample of 23 unplanned interruption events that had lasted more than 6 hours and found that although the ratio of 'no water' complaints to

affected properties varied for each event, 10% of customers on average tended to complain.

The following table lists the 2013/14, 2014/15 and 2016/17 outturn numbers of 'no water' complaints and properties affected by unplanned interruptions lasting more than 3 hours, including those caused by a third party.

	2013/14	2015/16	2016/17
'No Water' Complaints	28,128	21,775	22,066
Properties Affected	43,864	109,974	102,339
Complaint Percentage	64.1%	19.8%	21.6%

When the call data and OMIS data for 2013/14 is compared, i.e. 28,128 complaints versus 43,864 properties affected by unplanned interruptions lasting more than 3 hours including those caused by a third party, the complaint percentage is 64%. This percentage is much higher than the percentage derived from the sample and points to a shortfall in the number of properties affected and hence, an inaccuracy in the OMIS data.

When the call data and CIMS data for 2015/16 is compared, i.e. 21,775 complaints versus 109,974 properties, the complaint percentage is 20%. This percentage is more consistent with the percentage derived from the sample but is higher because interruption events with a duration of 3 hours or less are excluded. The analysis proves that the CIMS data is more accurate than the OMIS data.

When the call data and CIMS data for 2015/16 is compared, i.e. 21,775 complaints versus 109,974 properties, the complaint percentage is 22%. This percentage is similar to the 2015/16 percentage and confirms that the accuracy of the CIMS data is consistent.

The conclusion is that the accuracy of the data has improved with the introduction of CIMS and that the outturns are now more reflective of the actual numbers of properties affected by unplanned interruptions lasting more than 3 hours.

Audit Checks

NI Water carries out a number of audit checks aimed at ensuring that the data in its Annual Information Return is both reliable and accurate and that the confidence grade is justified. The audit checks ensure that affected properties have been reported under the correct category of interruption and that reporting is in accordance with the regulatory guidance and definitions.

During the year, Networks Water generated a total of 1,153 records of interruptions lasting more than 3 hours (some relating to the same events). All records were checked for accuracy and completeness by the Customer Field Managers. Following the extraction of data to spreadsheets, checks were carried out by CSD Services to ensure that the data remained consistent with CIMS and that no records had been inadvertently deleted or duplicated during migration between worksheets.

During the year, Capital Asset Delivery generated a total of 362 records of interruptions lasting more than 3 hours compared to 194 records in 2015/16. A random sample of 46 records, averaging 4 per month, was checked against the corresponding Interruption Record Sheets to ensure that the details had been accurately transcribed. This represents 12.7% of records.

Throughout 2016/17, the Company has continued to review its records of 'no water' complaints when determining the details of supply interruptions. And the Company has carried out checks to ensure consistency between CIMS and the Upward Reporting process relating to unplanned interruption events lasting more than 3 hours.

Line 20 – Population (Winter)

Note: All calculations relating to Line 20 were originally performed with the aid of a spreadsheet. For the purposes of the commentary, figures have been rounded and may give rise to rounding errors if used.

The following table provides a summary of the numbers of bed-spaces sold per month for hotel, guesthouse and B&B establishments in Northern Ireland from October 2015 to December 2016. The information was derived from Tables 1.3 of the NISRA publications *'Hotel Occupancy Statistics 2011-2016 Additional Tables' and 'Guesthouse, Bed and Breakfast and Guest Accommodation Occupancy Statistics 2011-2016 Additional Tables*, available as downloads from the Northern Ireland Statistics and Research Agency *(NISRA)* website.

NI Water has used the information to calculate the percentages of bed-spaces sold per month in 2016.

MONTH	HOTEL BED-SPACES SOLD	GUESTHOUSE & B&B BED-SPACES SOLD	TOTAL BED-SPACES SOLD	PERCENTAGE OF BED-SPACES SOLD IN 2016
Jan-16	170,152	20,316	190,469	4.60%
Feb-16	228,003	32,034	260,037	6.28%
Mar-16	265,847	43,912	309,758	7.48%
Apr-16	278,048	49,478	327,525	7.91%
May-16	305,799	72,256	378,055	9.13%
Jun-16	306,205	71,801	378,006	9.13%
Jul-16	380,267	90,761	471,029	11.38%
Aug-16	391,862	94,653	486,515	11.75%
Sep-16	320,343	64,406	384,749	9.29%
Oct-16	297,340	52,768	350,108	8.46%
Nov-16	263,380	46,333	309,713	7.48%
Dec-16	263,197	31,101	294,298	7.11%
Total	**3,470,444**	**669,819**	**4,140,264**	**100.00%**

The following statistic was derived from Table 1.4 of the NISRA publication *'Northern Ireland Annual Tourism Statistics 2016 Additional Tables'*, available as a download from the NISRA website.

	Date Range	Overall Nights
All Visitors (exc. NI Residents)	Jan 16 – Dec 16	**11,365,623**

Assumption: The regulatory guidance for AIR Table 2 Line 20 does not define the meaning of *'winter'*. For the purposes of this calculation, the winter months are deemed to be the six months in the year with the lowest percentage bed-spaces sold i.e. January, February, March, April, November and December. The percentage bed-spaces sold during the winter is the summation of the percentages for these six months.

Assumption: There is a direct relationship between bed-spaces sold and non-resident visitor nights.
Using the statistics on the previous page, the number of non-resident winter visitor nights was estimated as follows:

Percentage bed-spaces sold during winter =
4.60 + 6.28 + 7.48 + 7.91 + 7.48 + 7.11 = 40.86%

Estimated non-resident winter visitor nights =
= (11,365,623 / 100) x 40.86 = 4,644,240

According to AIR17: Table 7: Line 17, the baseline resident population was 1,861.58 x 10^3.

Using the baseline resident population and the estimated number of non-resident winter visitor nights above, the winter population was estimated as follows:

Estimated average non-resident winter visitors per night =
4,644,240 / (31 + 29 + 31 + 30 + 30 + 31) = 25,518

Population (winter) = 1,861,580 + 25,518 = **1,887,098**.

Changes in Methodology

Each year, NI Water reviews all of the latest tourism publications and adopts a methodology which best utilises the information available at the time.

For AIR16, the Company reverted to its AIR14 methodology when the annual number of non-resident visitor nights (January to December) had still to be published and the best alternative was an estimate, based on the number of non-resident visitor nights for the period October to September.

This year, the outturn for Line 20 has been calculated following the publication of annual tourism statistics for 2016 on 25th May. As such, it has not been necessary to estimate the annual number of non-resident visitor nights in 2016 and the methodology is consistent with the methodology used for AIR15.

For the purposes of calculating the non-resident winter visitor nights, the methodology is still based on the assumption that there is a direct relationship between the occupancy of hotels and guesthouses/B&Bs and visitor nights.

Significant year on year changes in reported figures including an explanation of any factors that may have influenced the figures

AIR15	Confidence Grade	AIR16	Confidence Grade	AIR17	Confidence Grade
1,862.72 x 10^3	C2	1,874.73 x 10^3	C2	**1,887.10 x 10^3**	**C2**

Last year, the Company reported a Table 2 Line 20 outturn of 1,874.73 x 10^3. For the purposes of the AIR17 commentary on year on year changes, the AIR16 outturn has been recalculated using updated data for the entire twelve-month period of 2016. The AIR16 revised outturn of 1,865.06 x 10^3 is 0.52% lower than the reported outturn.

Based on the AIR16 revised outturn, the estimated winter population has increased from 1,865.06 x 10^3 in AIR16 to 1,887.10 x 10^3 in AIR17, an increase of 22.03 x 10^3 *(1.18%)*. This increase can be attributed to changes in the component figures that make up this figure.

The estimated number of hotel bed-spaces sold in 2016 *(3,470,444)* was higher than the revised estimate for 2015 *(3,232,877)*. The estimated number of guesthouse and B&B bedspaces sold in 2016 *(669,819)* was higher than the revised estimate for 2015 *(511,267)*. The estimated number of non-resident visitor nights in 2016 *(11,365,623)* was also higher than the revised estimate for 2015 *(10,680,185)*.

According to the NISRA bulletin *'Northern Ireland Annual Tourism Statistics 2016'* published on 25th May 2017, 'the statistics point towards an upward trend in external tourism activity in Northern Ireland between 2011 and 2016.'

From March 2016, Ryanair started operating from Belfast International Airport and has since added numerous routes to various destinations in the UK and Europe. Visitors continue to be influenced to come to Northern Ireland by local visitor attractions, such as the Giant's Causeway and Titanic Belfast. The local film industry with Game of Thrones showcasing local locations may also have an impact on tourism.

Confidence Grade

Population (winter) is an estimate based on several sources of information:

1. The NISRA publications '*Hotel Occupancy Statistics 2011-2016 Additional Tables*' and '*Guesthouse, Bed and Breakfast and Guest Accommodation Occupancy Statistics 2011-2016 Additional Tables*' provide only an estimate of the monthly numbers of bed-spaces sold, based on the extrapolation of data for a representative sample group of establishments.
2. The NISRA publication *'Northern Ireland Annual Tourism Statistics 2016 Additional Tables'* provides only an estimate of the annual number of non-resident visitor nights, based on sample surveys. The estimate therefore has an associated degree of sampling error, determined both by the sample design and by the sample size. Sample surveys include the Northern Ireland Passenger Survey (NIPS) conducted by the Northern Ireland Statistics and Research Agency (NISRA), the Survey of Overseas Travellers (SOT) conducted on behalf of Fáilte Ireland and the Household Travel Survey (HTS) conducted by Central Statistics Office (CSO).

NI Water has assigned a confidence grade of **C2** to account for known deficiencies in the reliability and accuracy of the reported figure. Although there have been changes in the methodology, data confidence is still believed to be comparable to previous years.

The "2" has been assigned because even if all visits occurred in the winter, the difference in the calculated winter population would only be 36,931 *(+1.96%)*. *(see calculation below)*

11,365,623 / (31 + 29 + 31 + 30 + 30 + 31) = 62,448 non-resident visitors
1,861,580 + 62,448 = 1,924,028 residents + non-resident visitors
1,924,028 - 1,887,098 = 36,931
(36,931 / 1,887,098) x 100 = 1.96%

Lines 21-23 - DG4 Restrictions on use of water

Hosepipe restrictions are defined as applying to those area(s) where legal notification has been published restricting the use of hand held hosepipes. This will normally be via notifications in the press that the use of hosepipes is banned.

Drought Orders: The population affected by Drought Orders shall include all areas where Drought Orders under Part V Chapter 1 and Schedule 5 of the Water and Sewerage Services (NI) Order 2006 have been approved by the Minister and implemented by the company.

Sprinkler/unattended hosepipe restrictions are defined as applying to those area(s) where legal notification has been published restricting the use of sprinklers/unattended hosepipes. This will normally be via notifications in the press that the use of sprinklers/unattended hosepipes is banned.

Outturns and Confidence Grades

There were no hosepipe restrictions, drought orders or sprinkler/unattended hosepipe restrictions in 2016/17 and therefore, the percentage population experiencing DG4 Restrictions on Use of Water is 0.0% for Lines 21, 22 and 23.

The reliability assessments of “A” are based on the established procedures for the making of any order to prohibit or restrict the use of water. The accuracy assessments of “1” are a reflection that no orders were made during the reporting year.

Future Reporting

Northern Ireland Water has now developed a series of revised DG4 procedures that clarifies the reporting requirements and definitions and the responsibilities of those involved in the reporting process. The following documents outline in more detail the processes that are now applied:

1. NIW – DG4 Procedures May 2017
2. Drought Order Process Guidelines v.9

Annex A – Line Methodology for Table 2

Line 1 – Total Connected Properties at Year End

The total number of properties (domestic and non-domestic) connected to the distribution system at the end of the 2015/2016 reporting year. This includes properties which are connected but not billed (for example, temporarily unoccupied) but excludes properties which have been permanently disconnected (for example logical demolitions).

This figure is calculated from the Rapid Property Summary for AIR17 (dated 31st March, 17) as attached.

Rapid Property Summary - March 20

Total Connected properties at Year End	AIR17
Extant Property Total	884004
less	
Domestic no water / well water	9962
Domestic sewerage only	6
Non-domestic no water / well water	5771
Non-domestic sewerage only	19
Non-domestic measured – not charged (test meters)	591
Non-domestic site meters	14514
Non-domestic trade effluent	82
Non-domestic unmeasured – not charged	631
Invalid Classification	29
Total Connected Properties at Year End	**852399**

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 3 KEY OUTPUTS
SEWERAGE SERVICE - INTERNAL FLOODING (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**DG5 ANNUAL FLOODING SUMMARY**																				
1	Number of domestic properties connected to sewerage system	000	1	623 3	A2	628.3	B2	630.03	A2	638.1	A2	648.6	A2								
	(I) OVERLOADED SEWERS																				
2	Properties flooded in the year (overloaded sewers)	nr	0	189	B3	6	B2	28	B2	3	B2	3	B2								
3	Flooding incidents in the year (overloaded sewers)	nr	0	189	B3	6	B2	29	B3	4	B2	3	B2								
4	Flooding incidents (overloaded sewers attributed to severe weather)	nr	0	181	B3	5	B2	3	B4	1	B2	2	B2								
4a	Properties flooded in the year attributed to severe weather	nr	0	181	B3	5	B2	3	B5	1	B2	2	B2								
5	Props. where flooding limited to uninhabited cellars only (o/loaded sewers)	nr	0	0	B3	0	B2	0	B6	0	B2	0	B2								
	(ii) OTHER CAUSES																				
6	Properties flooded in the year (other causes)	nr	0	41	B3	55	B2	52	B2	38	B2	47	B2								
7	Properties which have flooded more than once in the last ten years (other causes)	nr	0	15	B3	26	B2	8	B2	11	B2	21	B2								
8	Flooding incidents (other causes - equipment failures)	nr	0	15	B3	14	B2	2	B2	1	B2	1	B2								
9	Flooding incidents (other causes - blockages)	nr	0	22	B3	36	B2	38	B2	34	B2	38	B2								
10	Flooding incidents (other causes - collapses)	nr	0	4	B3	5	B2	12	B2	3	B2	8	B2								
11	Props. where flooding limited to uninhabited cellars only (other causes)	nr	0	0	B3	0	B2	0	B2	0	B2	0	B2								
B	**DG5 PROPERTIES ON THE AT RISK REGISTER**																				
	(i) SUMMARY																				
12	2 in 10 register at end of year	nr	0	30	B3	62	B2	60	B2	59	B2	61	B2								
13	1 in 10 register at end of year	nr	0	10	B3	8	B2	8	B2	7	B2	6	B2								
14	Total 1 in 10 and 2 in 10 properties on the register at end of year	nr	0	40	B3	70	B2	56	B2	66	B2	67	B2								
15	1 in 20 register at end of year	nr	0	153	B3	120	B3	108	B2	94	B2	89	B2								
15a	Potential risk of property flooding identified requiring further investigation to assess at risk category	nr	0	0	B2	0	B2	0	B2	1	B2	2	B2								
16	Props. on the register which have not flooded in the past 10 yrs (excl. severe weather)	nr	0	32	B3	33	B3	23	B2	22	B2	27	B2								
17	Properties which have not flooded internally but suffer restricted toilet use (RTU)	nr	0	0	B2	0	B2	0	B2	0	B2	0	B2								
	(iii) ANNUAL CHANGES TO 2 IN 10 & 1 IN 10 REGISTERS																				
22	Removed by company action	nr	0	1	B3	3	B2	18	B2	3	B2	3	B2								
23	Removed because of better information	nr	0	2	B3	0	B2	0	B2	2	B2	1	B2								
24	Added because of better information (actually flooded)	nr	0	16	B3	33	B2	0	B2	3	B2	3	B2								
25	Added because of better information (modelled)	nr	0	0	A1	0	B2	4	B2	0	B2	2	B2								
26	Average capex cost of permanent solutions to 1 in 10 & 2 in 10 DG5 problems	£000/prop	1	168 8	B3	233.7	B2	68 5	B2	230.0	B2	32.8	B2								
	(v) ANNUAL CHANGES TO THE 1 IN 20 REGISTER																				
30	Removed by company action (1 in 20)	nr	0	65	B3	8	B2	10	B2	4	B2	4	B2								
31	Removed because of better information (1 in 20)	nr	0	24	B3	45	B2	16	B2	11	B2	1	B2								
32	Added because of better information (actually flooded - 1 in 20)	nr	0	53	B3	3	B2	25	B2	1	B2	0	B2								
33	Added because of better information (modelled - 1 in 20)	nr	0	0	A1	17	B3	4	B2	0	B2	0	B2								
34	Average capex cost of permanent solutions to 1 in 20 DG5 problems	£000/prop	1	45.1	B3	143.6	B2	80 9	B2	272.9	B2	38.8	B2								

Table 3 - Key Outputs – Sewerage Service – Internal Flooding

Line 1 – Number of Domestic Properties Connected to the Sewerage System

Northern Ireland Water's (NIW) property data is provided via a data download of the property database tables held within the RapidXtra billing system. The data is then manipulated within Microsoft SQL to produce the Rapid Property Summary Report.

In AIR12 we introduced an automated tool to populate the figures within Table 3. (Rapid Property Summary as the input). Our methodology for AIR17 has remained consistent.

The difference between the AIR16 and the AIR17 figure is 10464. The breakdown can be explained as follows:

1) New Connections during the 2016/17 reporting year. As detailed in the associated Line Methodology and as per Annex A, an issue with the system report has resulted in a change in methodology for this year. The figures are based on a reconciliation of New Connections extracted directly from Rapid (via CorVu), with the New Connections reported by the Customer Connections Team.
2) As a result of a customer contact. E.g. septic tank empty request, no water complaint, blocked sewer, updating of standing data e.g. removal of services etc. Within this category there are 2 scenarios:
    - The adding of properties NI Water allegedly did not know about and the adding of duplicates as the customers address could not be found on Rapid. For example, Rapid may hold the site number but when the customer contacts NI Water they quote the verified postal address that is different, therefore creating a duplicate. Another scenario - The street name may have changed from the time of New Connection to that of customer contact – street names can change in the early stages of site development.
    - The work on data validation has commenced, with new validations 'live' as a result of Phase 1 & 2 implementation, further validations will be implemented in Phase 3 & 3a during 2016/17 & 2017/18.
3) Removal of duplicates/properties as a result of data quality initiatives
4) The increased number of properties within the no water/well water category. Further detail provided within the Table 7 commentary.

In addition to the above, other data quality requirements have been built into the new CBC Contract. They cover all aspects of the property life cycle (creating, amending and demolishing properties) and data degradation will be monitored/measured throughout.

Annex A details the methodology followed for the figure calculated in Table 3 Line 1.

Internal sewer flooding

Objective/Aim

To maintain a verifiable DG5 register with the aim to provide an auditable method for identifying the specific properties which are affected by flooding or are at risk of flooding and the cause of flooding.

Internal Flooding Process

In line with the regulators instructions, an end-to-end review of the internal flooding process has been carried out. This process went live in April 2012. Wastewater Business Unit (WWBU) carries out extensive robust investigations to determine the cause of every individual internal flooding incident. Any internal flooding that does not fall into these Flooding Other Causes (FOC) categories is passed to Asset Performance for them to

carry out full Hydraulic Capacity evaluations and record them under the appropriate sections of the register. The evidence gathered is brought to an expert panel (the DG5 Panel) who examine the evidence presented for each incident and govern the addition of properties to and removal of properties from the register. All properties where actual internal flooding has occurred are recorded in the appropriate sections of the DG5 register i.e. In the excluded section: FOC due to Blockages, Collapses, Equipment Failure or Severe Weather or on the register in the 1:20, 1:10 or 2:10 sections.

The register is held on an Oracle database represented on the Corporate Asset Register as GIS layer on CARtomap. Although the Internal Flooding process is now in place, the process itself continues to be refined.

Problems as yet Undiscovered

A process has been established to allow problems as yet unreported to be included in the register through field managers flooding incident reports (FIR). In addition flooding incident field investigations now include concentric circle surveys to pick up unreported flooding and modeling provided by Drainage Area Plan consultant.

Assumptions

For the purpose of AIR17, NIW has assumed that a single incident includes recorded complaints from the same property on the same day or within three days. ‘3 days’ was chosen on the basis that a noticeable volume of repeat calls tend to be received within three days of an incident occurring. There is then a much longer passing of time before calls are again received from the same locality, suggesting that the original incident has passed and that the calls relate to a different incident.

An incident of internal flooding is assumed where a property has been flooded internally. If two adjacent properties are flooded at the same time, they are classed as two properties and two incidents.

Where a single property floods internally on two separate occasions then this is recorded as one property and two incidents.

Calculation Process - Lines 2 to 11,15a & 17

Data gathering and calculation is as described below.

Sources/Primary Process

Lines 2 – 11, 15a & 17 Properties and flooding incidents

A download of internal flooding records was obtained from the Ellipse system for the period April 2016 to March 2017 on a month by month basis. Investigations were carried out for each reported incident and those properties found not to be flooded after investigation, using information from the Sewer Maintenance Contractor, Flood Incident Report (FIR) Forms, Field Manager reports, Customer Field Manager reports, modelling provided by Drainage Area Plan consultant and contacting the Customers directly, were removed. The remaining properties were recorded as Flooding Incidents.

Sources/Secondary Process

1. Wastewater Business Unit (WWBU) carries out further investigations to determine the cause of every internal flooding incident.

2. WWBU assess the information held on customer report, Flood Incident Report (FIR), along with photographic evidence, closure details provided by the contractor and modelling provided by Drainage Area Plan consultant.
3. WWBU determines if the cause of the flooding incident was hydraulic incapacity or flooding other cause, i.e. Blocked Sewer, Equipment Failure, Collapsed Sewer or Severe Weather. This is done by a number of methods including site visits, concentric circle surveys, Customer Field Manager reports, customer interviews, field manager interviews and review of existing incident information. WWBU have also set up a formal InterDirectorate route to get copies of recorded Customer calls made available for record purposes.
4. If hydraulic incapacity is confirmed NIW now run a Hyrad Weather radar system report, which is used to determine if the incident is as a result of severe weather (Line 4).
5. These properties were then recorded on a spreadsheet under the appropriate categories for lines 2, 3, 4, 4a, 5, 6, 8, 9, 10 and 11 using the information gathered from, the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports, Drainage Area Plan consultant and contacting the Customers directly. All incidents of internal flooding attributed to severe weather are included in the total in Table 3 Line 3. A folder of evidence was created for all confirmed cases and this was brought to the monthly DG5 Panel for approval and addition to the appropriate section of the register. At the end of the reporting year, this was the data used for AIR 16 returns.
6. The figure for line 7 was obtained by getting a report ran in the DG5 Oracle Database, which holds the information as a DG5 layer in the GIS system.
7. Line 15a relates to properties that have not been fully investigated and categorized i.e. 2 for 2015/16.
8. The required information to populate Line 17 is extracted directly from the monthly spreadsheet completed by the contractor.

Changes in Methodology over the Previous Year

The FIR has been amended (February 17) as result of on-going meetings with MUL contractors; a completed copy is included (see Annex B.) The Business Unit proactively ensures that the FIR is fully completed by continual liaison between the MUL Contracts Manager and the Customer and Regulation manager (NIW) where queries/ problems are discussed and then resolved/ rectified by MUL. NIW has set up formal quarterly meetings with the Head of Function, the Business unit Manager, the Customer and Regulation manager and OCMC (Operations Contract Management Centre) (all NIW) and the MUL Contracts Manager to ensure all parties are fully aware of what is happening. On any alleged internal flooding incident where there is ambiguity, the Customer Field Manager attends to resolve the issue. WwBU also complete a monthly quality report to OCMC (Operations Contract Management Centre) which is used to assess if the contractor is penalised for not providing accurate data.

Confidence Grading for Table 3 lines 2 - 11, 15a and 17

Every reported incident of internal flooding is thoroughly investigated and crosschecked with the returned Flooding Incident Report Forms, Operations Staff, Customer Field Managers and the Customer where appropriate. The data is then recorded in the appropriate lines therefore the confidence grade on the figures reported for lines 2, 3, 4,4a, 5, 6, 7, 8, 9, 10, 11, 15A and 17 is deemed to be B2.

Lines 12 - 34 DG5 Properties on the at Risk Register and Annual Changes

PC15 Outputs Year 2.

The PC15 Business Plan included a target for removal of properties from the DG5 Internal Flooding Register by company action, which was 62:

The number of removals achieved in 16/17 was 7.

- [redacted] Ballymena. [redacted] (2 in 10)
- [redacted] Ballymena. [redacted] (1 in 20)
- [redacted] Ballymena. [redacted] (1 in 20)
- [redacted] Antrim [redacted] (1 in 20)
- [redacted] Lisburn [redacted] (1 in 10)
- [redacted] Lisburn [redacted] (1 in 20)
- [redacted] Lisburn [redacted] (1 in 10)

It should be noted 2 properties were also removed due to better information, giving a total of 9 properties being removed from the DG5 Register.

- [redacted] Newtownards (1 in 10)
- [redacted] Newtownards (1 in 20)

Additions to the Register

In year 16/17, 5 no. properties where added to the flooding register due to better information and modelling.

Added due to Better Information

- 1 property at [redacted], Comber (2 in 10)
- 1 property at [redacted], Newtownards (2 in 10)
- [redacted], Belfast, (2 in 10)

Added due to Modelling.

- [redacted], Lisburn (1 in 10)
- [redacted], Lisburn (1 in 10)

These 2 properties where added this year and then removed the same year due to final solution and model outcome being completed in 16/17.

Repeat Flooding

There has been no repeat flooding at any properties on the internal flooding register this year 16/17.

Mitigation Measures.

NI Water normally do not carry out mitigation measures as this programme of work is carried out by Rivers Agency as instructed by Local Government. In certain cases, NI Water would fit non-return valves.

Approval of Projects.

Approval of all projects for expenditure is approved out by the Internal DG5 Panel.

There was no cases of ‘Unknown cause’ of flooding of internal flooding being added to the DG5 Register in 16/17.

Confidence grades

Confidence grades for lines 12–16, 22–26 and 30–34 have stayed at B2.

Annex A – Line Methodology for Table 3

Line 1 – Number of Domestic Properties Connected to the Sewerage System

The total number of domestic properties (including voids) connected to the sewerage system at the end of the reporting year (31st March 2017).

This figure is based on the 31st March 2017 Rapid Property Summary for AIR17, as attached.

Rapid Property Summary - March 20

The figure is the total domestic properties (gross) connected for sewerage (including site meters, as these are not being billed).

Domestic Properties Connected to the Sewerage System	End March 2017
Total Gross Household Sewerage Properties	**648,573**

Annex B – Incident Report Form Contractor

Northern Ireland Water – Flooding Incident Report

Work Order Ref No: 05260403 Name: Glenvale Waste

Location: [redacted] DUNGANNON

Date: 22/03/2017 Arrival time: 21:38:00

1) Conversation with Home Occupier: Yes Access Refused: No

2) Photographs Taken: Both

3) Internal Flooding: Yes

Main Sewer	☒	Lateral Sewer	☐
Adjacent properties flooded	☐	Attached garages flooded	☐
Basements/Cellar flooded	☐	Restricted Toilet use	☐
Kitchen	☐	Hallway	☒
Living room	☐	Dining room	☐
Shop/integral store	☐	Downstairs bathroom	☐

4) External Flooding: No

Main Sewer	☐	Lateral Sewer	☐
Public road/footpath	☐	Public area	☐
Agricultural land	☐	Curtilage	☐
Detached garage flooded	☐	Detached shed or store flooded	☐

5) Comments on cause of reported incident: (Select only one category below)

Blockage	☒	Collapsed sewer	☐
Defective road gulley	☐	Defective private drain	☐
M&E equipment failure	☐	Further investigation by NIW required	☐

Other:

6) Clean up operations:

Not Required ☐ Further Action Required ☐ Completed ☒

7) Previous History:

Yes ☐ No ☒ Not Aware ☐

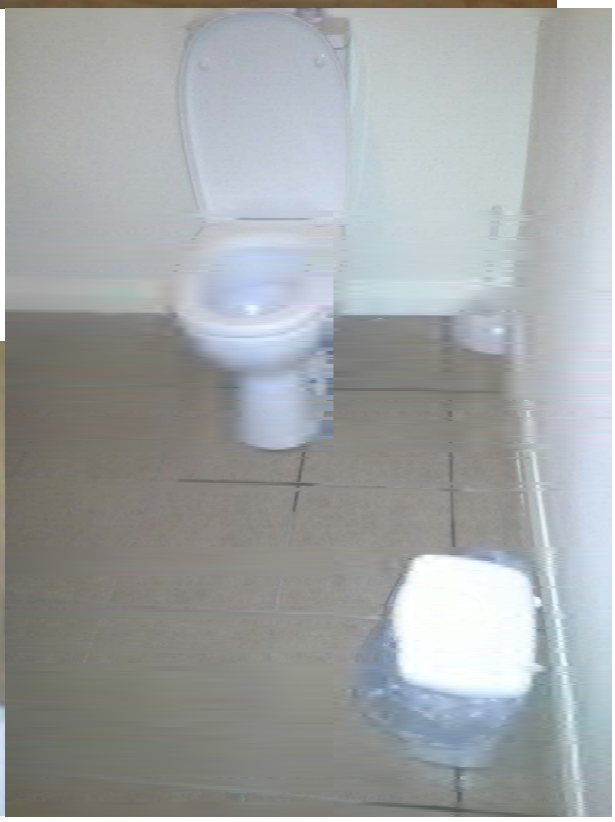
8) Weather Conditions:

Dry ☒ OR Wet ☐: Heavy ☐ Medium ☐ Light ☐

Comments: Especially for Flooded jobs or Follow on jobs

NEEDS CCTV FROM MANHOLE INSIDE PROPERT WORK Control was contacted cleared (I) internal flooding inside hallway NI Water onsite.

PHOTO FOR FLOODED JOBS:



NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 3A KEY OUTPUTS
SEWERAGE SERVICE - EXTERNAL FLOODING (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**ANNUAL FLOODING SUMMARY**																				
	(I) OVERLOADED SEWERS																				
1	Areas flooded externally in the year (overloaded sewers)	nr	0	225	D6	92	D6	117	D6	23	D6	20	D6								
2	Curtilege flooding incidents in the year (overloaded sewers)	nr	0	97	D6	70	D6	86	D6	17	D6	16	D6								
3	Highway flooding incidents (overloaded sewers)	nr	0	32	D6	23	D6	26	D6	6	D6	4	D6								
4	Other flooding incidents (overloaded sewers)	nr	0	96	D6	22	D6	20	D6	0	D6	0	D6								
5	Total flooding incidents (overloaded sewers)	nr	0	225	D6	115	D6	132	D6	23	D6	20	D6								
6	External flooding incidents (overloaded sewers attributed to severe weather)	nr	0	29	D6	1	D6	14	D6	6	D6	3	D6								
6a	Areas flooded externally attributed to severe weather	nr	0	29	D6	1	D6	14	D6	6	D6	3	D6								
	(ii) OTHER CAUSES																				
7	Areas flooded externally in the year (other causes)	nr	0	3,212	D6	3,348	D6	4,379	D6	3,889	D6	3,819	D6								
8	Areas which have flooded more than once in the last 10 years (other causes)	nr	0	N/C		N/C		N/C		N/C		N/A	0								
9	Flooding incidents (other causes - equipment failure)	nr	0	19	D6	23	D6	25	D6	19	D6	8	D6								
10	Flooding incidents (other causes - blockages)	nr	0	3,526	D6	3,293	D6	4,269	D6	3,773	D6	3,543	D6								
11	Flooding incidents (other causes - collapses)	nr	0	31	D6	73	D6	85	D6	97	D6	268	D6								
B	**AREAS ON THE 1:10, 2:10, 1:20 AT RISK REGISTER**																				
	(I) SUMMARY																				
12	2 in 10 register at end of year	nr	0	0	D6	190	D6	212	D6	226	D6	232	D6								
13	1 in 10 register at end of year	nr	0	213	D6	7	D6	20	D6	20	D6	20	D6								
14	1 in 20 register at end of year	nr	0	0	D6	16	D6	84	D6	86	D6	87	D6								
15	Total on the 1:10, 2:10, 1:20 register at end of year	nr	0	213	D6	213	D6	316	D6	332	D6	339	D6								
15a	Potential risk of property flooding identified requiring further investigation to assess at risk category	nr	0	N/C		0	D6	N/C		N/C		N/A	0								
	(iii) ANNUAL CHANGES TO 1:10, 2:10, 1:20 REGISTER																				
20	Removed by company action (external only)	nr	0	0	A1	0	A1	0	A1	0	A1	1	A1								
21	Removed by company action (external linked)	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1								
22	Removed because of better information	nr	0	0	A1	113	A1	0	A1	0	A1	0	A1								
23	Added because of better information (actually flooded)	nr	0	213	A1	113	A1	103	A1	16	A1	7	A1								
24	Added because of better information (modelled)	nr	0	0	A1	0	A1	0	A1	0	A1	1	A1								
25	Transferred from external to internal register	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1								

Table 3a - Key Outputs – Sewerage Service – External Flooding

Introduction

The processing of external flooding incidents has continued as it did in year 2015-16. The in-house resource devoted to this processing and analysis continues to be extremely limited. As a consequence, the process continues to be heavily dependent upon the accuracy of the information provided by the external maintenance contractor. Throughout the year, analysis of external flooding incidents is based upon monthly spreadsheets and Flooding Incident Report sheets, submitted by the external maintenance contractor. Each incident which is classified by the contractor as potentially 'hydraulic' – i.e. which does not have an 'other cause' identified - is subject to an investigation by the Asset Performance section. The investigation will recommend either that the incident is confirmed as hydraulic, or recommend that the incident be excluded.

Each incident is classified by the contractor as affecting one of curtilage, highways or 'other'. An analysis is carried out to define the total number of areas affected.

Those incidents classified by the contractor as 'other causes' are defined, (by the contractor), as due to one of 'equipment failure', blockage or collapse.

Lines 1-11 - Annual Flooding Summary

The analysis of external flooding incidents is summarised in the spreadsheet 'Reported External Flooding for 2016-17'; the figures within Table 3a have been transferred from that spreadsheet.

The total number of 'overloaded sewers' incidents for the year 2016-17 was 20. The total number of 'other causes' incidents has decreased from 3889 in 2015/2016 to 3819, in 2016/2017.

As there is reliance upon the information supplied by the external contractor, a low confidence grade, of D6, continues to be attached.

Line 8 – Areas which have flooded more than once in the last 10 years (other causes)

This line cannot be populated as the processing of external incidents has only been properly executed for two years.

Lines 12-25 - At Risk Register

The total number of areas, on the Register at the start of year 2016/17 was 332.

The processing of external flooding incidents has continued as it did in year 2015/16, resulting in 8 areas being added to the Register, in the assigned categories (2 in 10, 1 in 10, 1 in 20).

One area was removed by company action under an operations scheme. This brings the total number of areas on the Register to 339.

Capital schemes which address external flooding only, are in general, not funded – hence the zero entry for removals by company action.

As the primary input to the register is the processing of annual flooding incidents, the same confidence grade, of D6, is assigned.

NORTHERN IRELAND WATER - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 4 KEY OUTPUTS
CUSTOMER SERVICE - 1 (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	DG6 RESPONSE TO BILLING CONTACTS - GENERAL																				
1	Total billing contacts	nr	0	77,051	B2	78,463	B2	75,545	B2	75,490	B2	77,698	B2								
2	Number dealt with within 5 working days	nr	0	77,118	B2	78,398	B2	75,520	B2	75,462	B2	77,679	B2								
3	Number dealt with in more than 10 working days	nr	0	26	B2	30	B2	9	B2	11	B2	4	B2								
4	DG6 Percentage dealt with within 5 working days	%	2	100.09	B2	99 92	B2	99.97	B2	99 96	B2	99.98	B2								
5	Percentage dealt with in more than 10 working days	%	2	0.03	B2	0 04	B2	0.01	B2	0 01	B2	0.01	B2								
B	CONNECTED PROPERTIES																				
6	Number of properties connected for water supply only	nr	0	152,771	A2	155,064	B2	157,260	A2	160,991	A2	163,246	A2								
7	Number of properties connected for water and sewerage service	nr	0	665,189	A2	669,910	B2	670,800	A2	678,719	A2	689,153	A2								
8	Number of properties connected for sewerage services only	nr	0	25	A2	24	B2	25	A2	24	A2	25	A2								

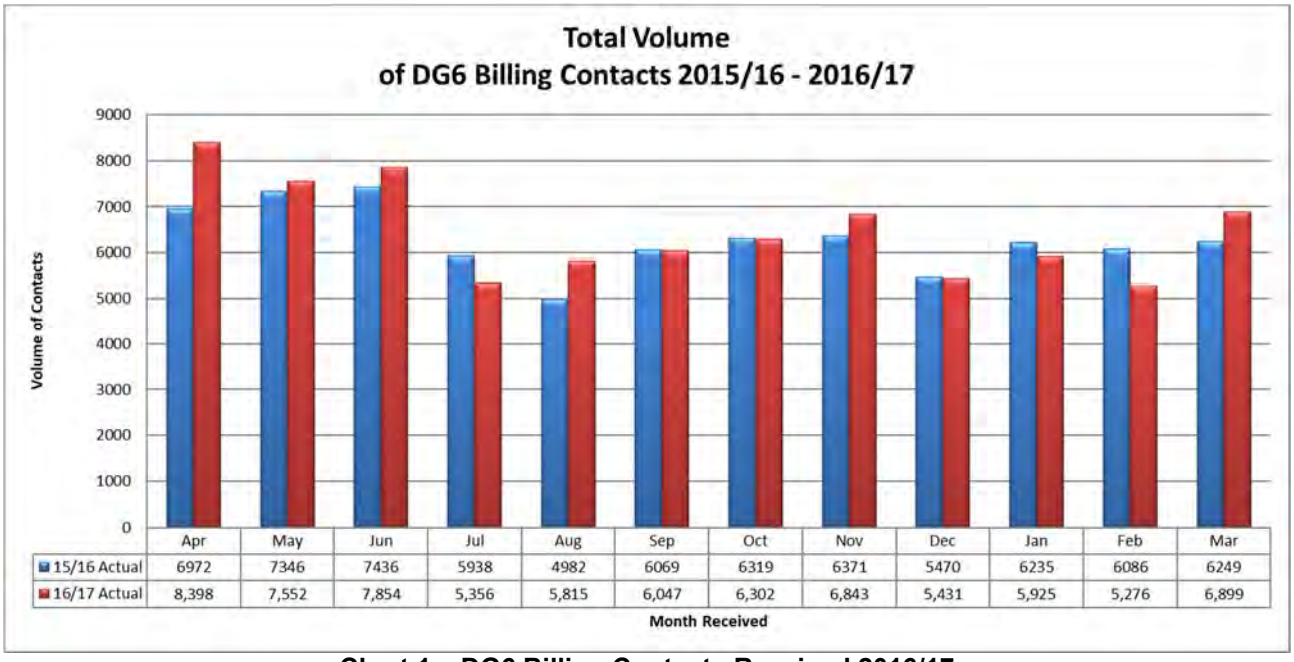
Table 4 – Customer Service 1

Lines 1 - 5 - DG6 – Response to Billing Contacts

This was the tenth year of non-domestic billing by Northern Ireland Water (NIW). Following decision of Northern Ireland Executive, domestic charges continued to be deferred for 2016/17 charging year.

No material changes, other than tariff changes, were made to billing in 2016/17.

The chart below shows the DG6 received volumes during 15/16 -16/17.



	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
15/16 Actual	6972	7346	7436	5938	4982	6069	6319	6371	5470	6235	6086	6249
16/17 Actual	8,398	7,552	7,854	5,356	5,815	6,047	6,302	6,843	5,431	5,925	5,276	6,899

Chart 1 – DG6 Billing Contacts Received 2016/17

The increased volume during quarter one was due to the annual bill run whereby unmeasured bills were issued for the start of April with recovery notices being issued as per policy, 28 days later where bills remained unpaid. This reflects the normal profile expected following the annual bill run.

Top Reasons for Customer Contact

Table 1 lists the top 5 reasons for billing contacts in 2016/17

Debit / Credit Card Payment	22%
Promise Of Payment	10%
Checking Payment Recd	6%
High Cons Advice Given	4%
Disputd Liab Supply	4%

Table 1 – Top 5 DG6 contact types 2016/17

Debit/credit card payments and promises to pay remain the top reasons for billing contacts due to continued focus on debt collection activities during the year. These would be seen as “wanted” contacts.

Reporting Method

The source data for DG6 Table 4 (Lines 1 to 5) is reported using the submitted methodology stated for DG6.

Monthly reports for DG6 (received and closed) are run by Echo and independently validated by the NIW MI & Data Team. On the first working day of each month, the DG6 reports are run for both the current and previous months to accurately update received and closed figures on a retrospective basis to support the annual reconciliation. Variances are queried with NIW Account Services and Echo and resolved as they arise.

Responses

For DG6 reporting purposes, the date of resolution of the item or date of the substantive response/holding response is used as the closure date. If a customer has a billing-related query that leads to a recalculated bill, the date of the response (verbal or written) explaining the reason for the bill is used as date and timestamp of the response. The recalculated bill is generated overnight and issued under separate cover.

No current plans to reduce the holding response period during AIR 17.

NB The majority of DG6 contacts that cannot be resolved within 5 days require a site visit by a Meter Query Technician (MQT). It is not unusual that the requirement for remedial meter maintenance work is identified during these site visits. The 40 day period should allow time for an initial site visit to be performed by a MQT, any routine meter maintenance work requested and completed, the resolution confirmed and the final response drafted and issued to the customer.

However, in certain circumstances, especially where a site visit is not required, a 40-day hold may not be required and a shorter period is given in the holding response.

Re-categorisation between Regulatory Categories

NIW has procedures in place for instances where written contacts are changed from one DG category to another e.g. DG6 to DG7. The process document, **"Account Services - Re-categorisation of written contacts"**, is embedded as Document 1 for reference purposes.

NIW_ACS_Re-categ
orisation of written cc

Document 1 - Re-categorisation of written contacts

Open contacts can be re-categorised using Rapid screen wccm11 (Contact Amendments), and closed contacts can be re-categorised using Rapid screen wccm91 (Close Date Maintenance).

There are a number of stages at which the categorisation of a billing contact can be reviewed after it has been scanned, logged & indexed.

Whilst not exhaustive, the main activities during which the categorisation of contacts is regularly checked are:

- Agent Review - it is the responsibility of the Account Services Agent to ensure that each contact they are handling is closed in line with reporting guidelines. On initial review, they should ensure that the contact has been correctly categorised in line with the DG/Contact definitions. If incorrect, it is their responsibility to ensure that the contact is updated on Rapid accordingly. If unsure, they should seek guidance from their line manager.
- The MI & Data Team within CSD Services perform monthly sampling on 50 randomly selected closed DG6 Telephone and Written contacts. Any discrepancies found when carrying out the Telephone sampling are reported and escalated to Echo as part of NIWs response to the Monthly Business Review Pack.
- Written sampling results are sent to the Account Services Mgmt. Team (ASMTM) for review. It is the responsibility of the ASMTM to ensure that any agreed exceptions that require re-categorisation are retrospectively updated on Rapid.
- ASMTM Coaching – Members of ASMTM perform coaching using sampling of closed contacts. It is the responsibility of the ASMTM to ensure that any contacts identified through this process that require re-categorisation are updated on Rapid.

An AIR 16 audit recommendation (for both Tables 4 and 5) from the Regulators Report reads as follows: “Recommend that higher risk DG6 categories are reviewed by NI Water in order to strengthen procedures, definitions and training for these areas.”

This audit recommendation has been actioned and implemented by ASMTM within the DG6 team:

- Feedback has been given to individual Customer Support Agents who logged the contacts logged as DG6 but identified as being DG7.
- Feedback has been given to individual Account Services Agents who case-managed and closed the contacts logged as DG6 but identified as being DG7.
- Account Services Team have been given a general briefing on logging and DG Definitions.
- DG Definitions document have been be posted in each bay in Account Services.
- Higher risk DG6 categories have been included in monthly Customer Support sampling audits, the Customer Support compliance checks for October 2016 – March 2017 embedded below for reference.

Customer Support Compliance Audit Sa

Email and Faxes

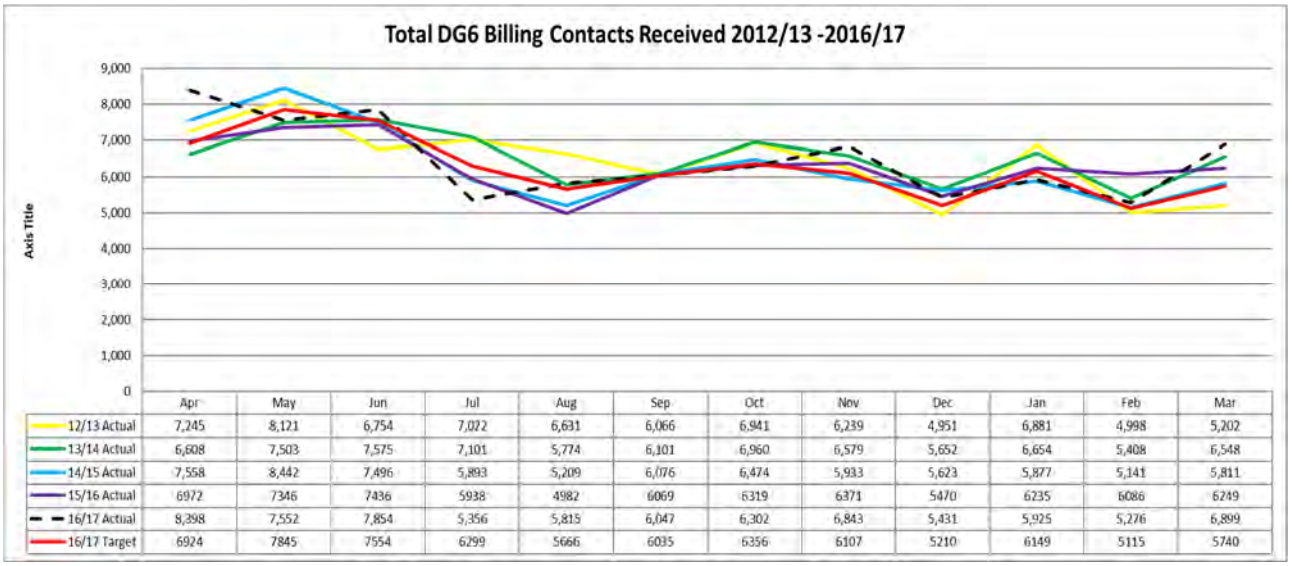
Systems remained in place to ensure that the receipt date of email/fax contacts is recorded as the date it is delivered to the company with the following working day being recorded as Day 1.

Payment Cards

NIW does not issue payment cards to non-domestic customers.

DG6 Volumes Year-on-year

DG6 received volumes from 2012/13 to 2016/17 is displayed in Chart 2.



	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
12/13 Actual	7,245	8,121	6,754	7,022	6,631	6,066	6,941	6,239	4,951	6,881	4,998	5,202
13/14 Actual	6,608	7,503	7,575	7,101	5,774	6,101	6,960	6,579	5,652	6,654	5,408	6,548
14/15 Actual	7,558	8,442	7,496	5,893	5,209	6,076	6,474	5,933	5,623	5,877	5,141	5,811
15/16 Actual	6972	7346	7436	5938	4982	6069	6319	6371	5470	6235	6086	6249
16/17 Actual	8,398	7,552	7,854	5,356	5,815	6,047	6,302	6,843	5,431	5,925	5,276	6,899
16/17 Target	6924	7845	7554	6299	5666	6035	6356	6107	5210	6149	5115	5740

Chart 2 - DG6 received 2012/13 to 2016/17

The total received volume for 2016/17 is 77,698 there is a slight increase when compared with 2015/16 total 75,473 the final total of 77,698 is 2,698 more than the volumetric target for 2016/17.

End of Year (Contacts not dealt with at end of year)

Based on data extracted on 07.04.17

- 307 DG6 contacts received during 16/17 were open;
- the oldest open DG6 contact received during 16/17 was 122 working days old;
- 307 DG6 contacts received during 16/17 were open for more than 5 working days, each pending completion of agreed actions as outlined in substantive holding responses;
- The average age of an open DG6 contact received during 16/17 was 29 working days.

Self Service Platform

On 9th February 2015, NIW announced the provision of additional web-based services for customers. The services are aimed predominantly at non-domestic customers who have an account with NIW and make it easier for them to pay bills online and check their accounts. The service also allows domestic customers with septic tanks to order their tank to be 'de-sludge'.

Once registered, customers are able to:

- view their account balance;
- view the payment plan of individual schedules;
- view bill and payment history;
- view desludging request history;
- process a new desludging request;
- pay a bill; and
- Manage their account details.

Northern Ireland Water's (NIW) property data is taken from the RapidXtra billing system and manipulated within Microsoft SQL to produce the Rapid Property Summary Report.

Line 6 – Number of Properties Connected for Water Supply Only

AIR16 figure - 160991
AIR17 figure - 163246

There has been a net increase of circa 2255 properties during the 16/17 year that are connected only for water.

As with Table 2, Table 3, Table 7 & Table 13 we have identified that properties can be added to/removed from the billing system via the methods below:-

1. New Connections during the 2016/17 reporting year. As detailed in the associated Line Methodology and as per Annex A, an issue with the system report has resulted in a change in methodology for this year. The figures are based on a reconciliation of New Connections extracted directly from Rapid (via CorVu), with the New Connections reported by the Customer Connections Team.
2. As a result of a customer contact. E.g. septic tank empty request, no water complaint, blocked sewer, updating of standing data e.g. removal of services etc. Within this category there are 2 scenarios:
    1. The adding of properties NI Water allegedly did not know about and the adding of duplicates as the customers address could not be found on Rapid. For example, Rapid may hold the site number but when the customer contacts NI Water they quote the verified postal address that is different, therefore creating a duplicate.
    2. Another scenario - The street name may have changed from the time of New Connection to that of customer contact – street names can change in the early stages of site development.
        - The work on data validation has commenced, with new validations 'live' as a result of Phase 1 & 2 implementation, further validations will be implemented in Phase 3 & 3a during 2016/17 & 2017/18.
3. Removal of duplicates/properties as a result of data quality initiatives
4. The increased number of properties within the no water/well water category. Further detail provided within the Table 7 commentary.

In addition to the above, other data quality requirements have been built into the new CBC Contract. They cover all aspects of the property life cycle (creating, amending and demolishing properties) and data degradation will be monitored/measured throughout.

Line 7 – Number of Properties Connected for Water and Sewerage Services

AIR16 figure – 678719
AIR17 figure - 689153

There has been a net increase of circa 10434 properties connected for water and sewerage services during the 16/17 year – refer to Line 6 commentary for further detail.

Line 8 - Number of Properties Connected for Sewerage Services Only

AIR16 figure – 24
AIR17 figure - 25

The number of properties connected for sewerage only has increased by 1 property during the 16/17 reporting year.

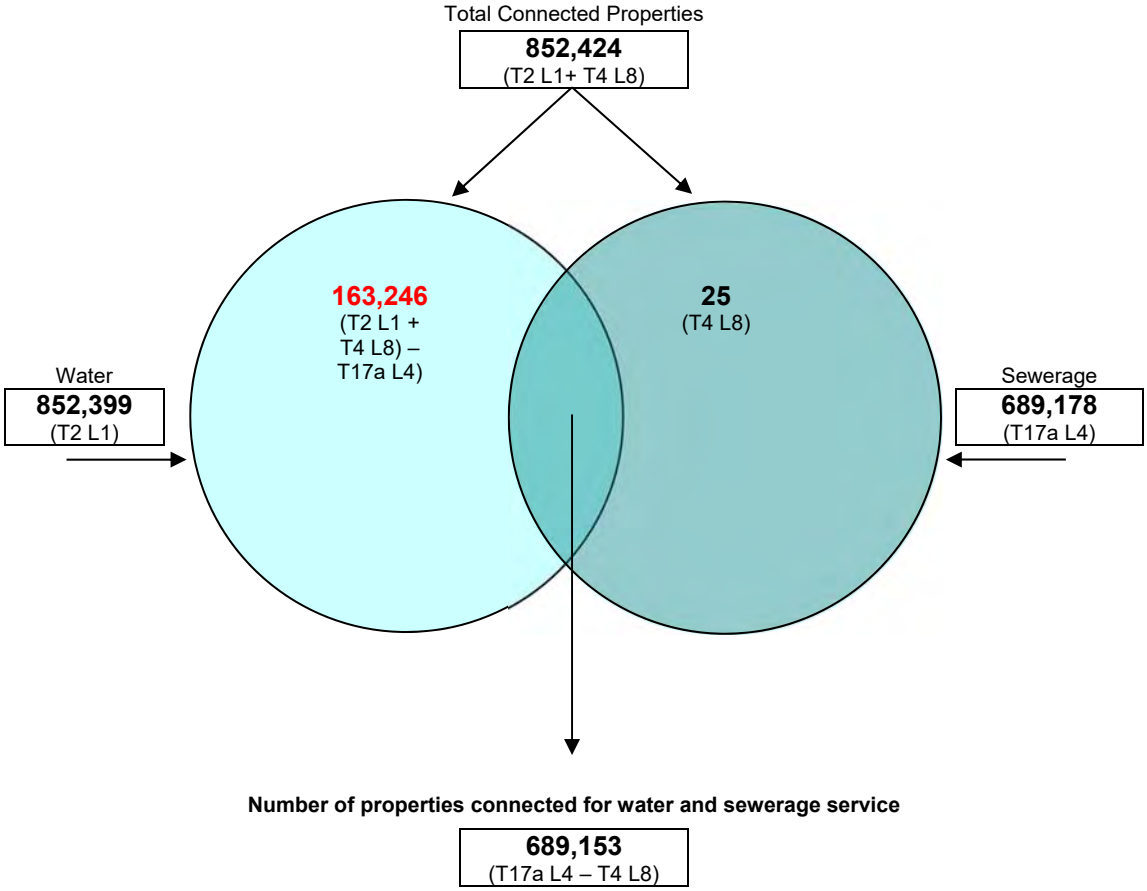
Annex A details the methodology followed for the figures calculated in Table 4 Lines 6-8.

Annex A – Line Methodology for Table 4

Line 6 - Number of Properties Connected for Water Supply Only

The total number of household and non-household properties connected to the water distribution system for water supply only, at the end of the AIR17 reporting year. This includes properties that are connected but not billed (e.g. temporarily unoccupied) but excludes properties that have been permanently disconnected.

This figure is taken from the Rapid Property Summary for AIR17 and is displayed in the diagram below:



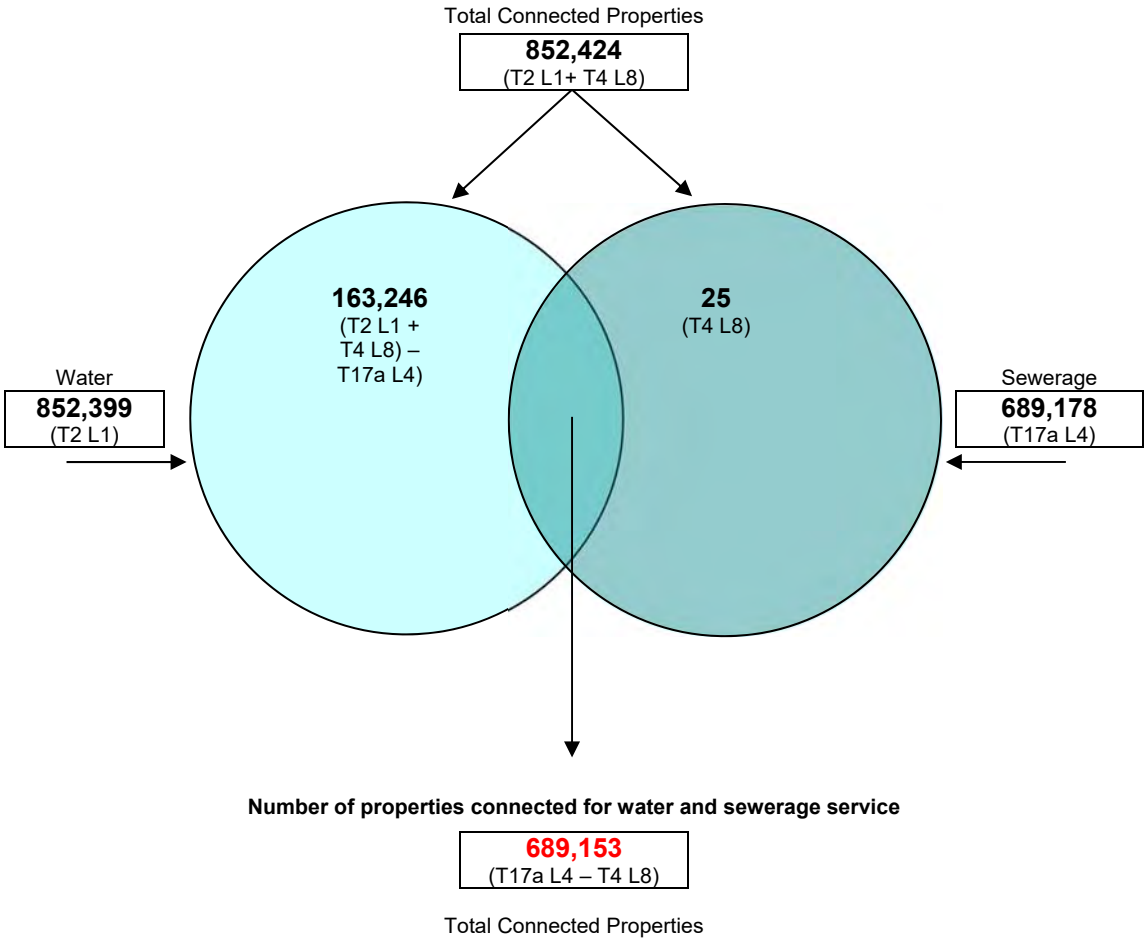
Therefore

	End March 2017
Total Connected Properties (T2 L1 + T4 L8)	852424
less	
Total Connected Properties for Sewerage (T17a L4)	689178
Total Connected for Water Only	**163,246**

Line 7 - Number of Properties Connected for Water and Sewerage Services

The total number of household and non-household properties connected for both water and sewerage services at the end of the reporting year. This includes properties that are connected but not billed (e.g. temporarily unoccupied) but excludes properties that have been permanently disconnected.

This figure is taken from the Rapid Property Summary for AIR17 and is displayed in the diagram below:



Line 8 - Number of Properties Connected for Sewerage Services Only

The total number of household and non-household properties connected for sewerage services only at the end of the reporting year. This includes properties that are connected but not billed (e.g. temporarily unoccupied) but excludes properties that have been permanently disconnected.

This figure is taken from the Rapid Property Summary for AIR17.

	End March 2017
Domestic sewerage only	6
plus	
Non-domestic sewerage only	19
Total Properties Connected for Sewerage Only	**25**

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 5 KEY OUTPUTS
CUSTOMER SERVICE - 2 (TOTAL)

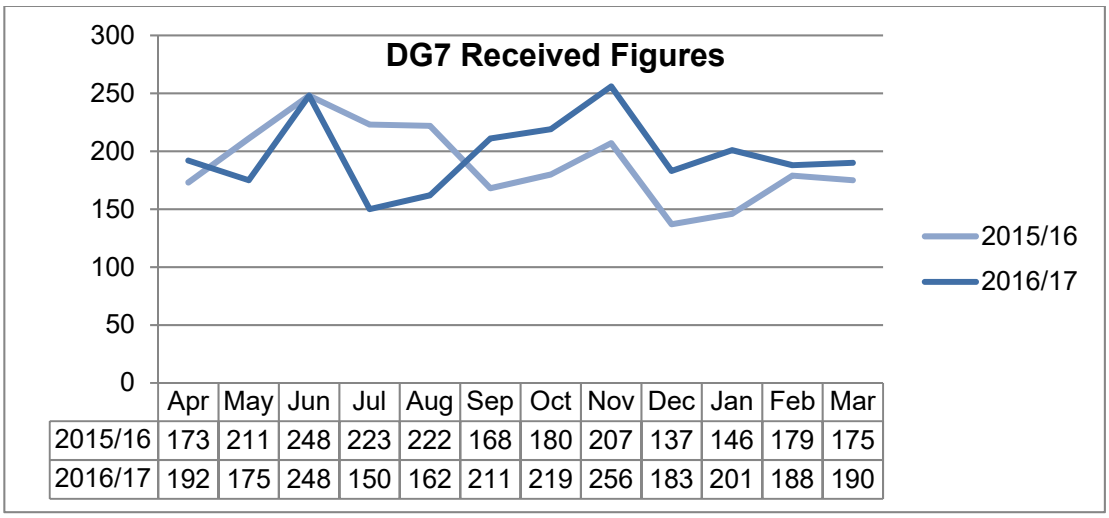
	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**DG7 RESPONSE TO WRITTEN COMPLAINTS**																				
1	Total written complaints	nr	0	3,173	B2	2,505	B2	2,364	B2	2,269	B2	2,375	B2								
2	Number dealt with within 10 working days	nr	0	3,166	B2	2,498	B2	2,363	B2	2,266	B2	2,375	B2								
3	Percentage dealt with within 10 working days	%	2	99.78	A1	99.72	A1	99.96	A1	99.87	A1	100.00	A1								
4	Number dealt with in more than 20 working days	nr	0	1	B2	2	B2	0	B2	2	B2	0	B2								
5	Percentage dealt with in more than 20 working days	%	2	0.03	A1	0.08	A1	0.00	A1	0.09	A1	0.00	A1								
B	**DG8 BILLS FOR METERED CUSTOMERS**																				
6	Total metered accounts	nr	0	110,164	A1	115,227	A1	118,732	A1	123,763	A1	127,807	A1								
7	Metered accounts excluded from indicator	nr	0	42,688	A1	47,784	A1	51,214	A1	55,875	A1	59,428	A1								
	(I) NO. OF CUSTOMERS WITH METERED ACCOUNTS RECEIVING AT LEAST ONE BILL DURING YEAR BASED ON METER READING:																				
8	Company readings	nr	0	66,557	A1	66,775	A1	66,855	A1	67,319	A1	68,025	A1								
9	Company or customer readings (or both)	nr	0	66,622	A1	66,840	A1	66,916	A1	67,366	A1	68,051	A1								
	(ii) NUMBER OF CUSTOMERS WITH METERED ACCOUNTS RECEIVING:																				
10	Estimated bills only	nr	0	550	A1	433	A1	548	A1	426	A1	270	A1								
11	No bills received during the report year	nr	0	304	A1	170	A1	54	A1	96	A1	58	A1								
12	Unread by company for 2 years	nr	0	310	A1	186	A1	164	A1	207	A1	173	A1								
C	**DG9 TELEPHONE CONTACT**																				
13	Total calls received on customer contact lines	nr	0	219,399	A2	226,881	A2	230,847	A2	210,487	A2	217,023	A2								
14	All lines busy	nr	0	0	A2	0	A2	32	A2	159	A2	63	A2								
15	Total of calls not abandoned	nr	0	216,006	A2	223,256	A2	226,204	A2	209,284	A2	216,015	A2								
16	Call Handling Satisfaction	nr	2	4.54	A1	4.63	A1	4.65	A1	4.59	A1										
17	Total telephone complaints	nr	0	73,158	A2	74,316	A2	76,536	A2	61,316	A2	62,866	A2								
D	**SPECIAL ASSISTANCE REGISTER**																				
18	Customers on the special assistance register	nr	0	2,675	A2	2,903	A2	3,084	A2	3,163	A2	2,017	A1								
E	**CUSTOMER SATISFACTION MEASURES**																				
19	Total contacts	nr	0									257,866	A2								
20	Unwanted contacts	nr	0									110,197	A2								
21	Unwanted contacts as a % of total contacts	%	2									42.73	A2								
22	First Point of Contact Resolved (FPOCR)	%	1									66.5	A2								
23	Customer advocacy measure	nr	2									27	A1								
24	Omnibus survey question 1	nr	1									80.3	A1								
25	Omnibus survey question 2	nr	1									11.2	A1								

Table 5 – Customer Service 2

Lines 1-5 - DG7 Response to written complaints

Received Volumes

The chart below shows the DG7 received volumes during 15/16 and 16/17.



	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
2015/16	173	211	248	223	222	168	180	207	137	146	179	175
2016/17	192	175	248	150	162	211	219	256	183	201	188	190

The chart shows an increase in the overall volume of written complaints received in 16/17 compared to the previous year: 2375 in total received in 16/17 compared with a total of 2269 received in the previous reporting period.

If comparing with average monthly received figures based on the data for the past 3 years, received volumes in 16/17 were above average monthly received figures in 9 of the 12 months.

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
2014/15	176	187	214	213	184	239	213	178	179	214	167	200
2015/16	173	211	248	223	222	168	180	207	137	146	179	175
2016/17	192	175	248	150	162	211	219	256	183	201	188	190
Average	180	191	237	195	189	206	204	214	166	187	178	188

The most notable of these above-average monthly volumes was received during November 2016. Whilst there are no specific events, which can be directly attributed to the increase, the volume can be partially attributed to the reasons listed below:

- greater than average complaints in the Water category;
- greater than average complaints in the Charges & Billing category, in particular those complaints disputing liability for charges; and
- greater than average complaints in the Sewerage category.

As in previous years, the number of written complaints in the Charges and Billing category was highest, representing 41% of the total received across the reporting period.

These were for a variety of causes, some of which are summarised below:

- Over four hundred and forty complaints were recorded as being from customers disputing liability for charges.

- Over one hundred complaints were recorded as being about leakage allowances or high consumption.

It has been identified that 96 of the complaints received during the reporting period were linked to customer accounts, which have been reviewed and revised as part of the Metering & Billing Project. This project seeks to identify and resolve data quality and billing accuracy issues, put processes and structures in place to prevent regression and improve the overall customer experience.

End of Year (Contacts not dealt with at end of year)

Based on data extracted on 2 May 2017, 0 DG7 contacts received during 16/17 complaints remained open.

Petitions

No DG7 contacts were received which could be described as petitions.

CCNI Written Complaints Assessment

The 4th formal CCNI Written Complaints Assessment was held on 31 March 2016 with the final report published during Q1, 16/17.

The following recommendations were agreed:

- where possible, and where it will not be detrimental to the quality of the response, responses should be sent within ten working days not on the tenth working day;
- key information should be delivered to customers sooner;
- sometimes a departure from "normal procedure" significantly improves the customer's experience (refers to a case where a *telephone response was used to good effect instead of written response*);
- responses must be tailored to the customer's individual circumstances, recognise the historic aspects of the complaint and respond to all questions and issues raised by the customer; and
- customers contesting or unhappy with the original response or customers raising delicate or contentious issues should continue to be advised of Northern Ireland Water's complaints procedure and CCNI.

E-mail and Faxes

Systems remained in place to ensure that the receipt date of email/fax contacts is recorded as the date it is delivered to the company with the following working day being recorded as Day 1.

1764, or 74.27%, of the total DG7 received volume were recorded with a document type of "email".

2 DG7 contacts were recorded as having a document type of "fax".

Self-Service Portal

The "Contact Us" section of the online self-service portal allows customers to submit complaints on completion of an online form.

The resulting complaints are received as emails and reported as such.
The link as is below:
https://selfservice.Nothern Ireland Waterater.com/ContactForm#Complaint

Complaints about Contractors
The process which supports the recording of written complaints received directly by PPP concessionaires (or other contractors working on NI Water's behalf) remained in place throughout 16/17.

No complaints of this nature were recorded via this process during the reporting period.

Complaints about HVCA
There were no written complaints recorded as being related to the High Volume Call Answering system.

NI Direct
There were no complaints received through NI Direct in respect to the company's call centre or field staff responses to Floodline incidents.

Telephone Complaints
Complaints received via telephone are reported as DG9 telephone complaints, not DG7. Billing telephone complaints are reported as DG6.

Date of Receipt
Written complaints are date-stamped per the date of receipt.

Date of Dispatch
The date of dispatch refers to the date on which a response is sent to the customer. The date of dispatch is recorded as the date closed.

Response Time
This is the number of working days between receipt of a contact by Northern Ireland Water up to and including the day of dispatch of a response. For the purpose of this calculation, the day of receipt (provided it is a working day) is counted as day zero and the next working day as day one.

When an email or fax is received after 16:00, it will be scanned, logged and indexed on the next working day. The date of receipt recorded will match the actual date of receipt.

The reported date of receipt for emails/faxes received outside of normal operating hours is the actual date on which the complaint was delivered to the company. For example, if an email is received on a Saturday, this is recorded as day zero. The next working day (normally the Monday) would be counted as day one. If an email is received on a Sunday then this is recorded as date of receipt (day zero) and (normally) Monday as day one.

Substantive Holding Reply
This is defined as a response to a written complaint, which advises the customer that Northern Ireland Water needs to undertake additional investigations or other actions before being able to provide a full response. A holding response is considered substantive if it advises the customer what further action needs to be taken in order to fully respond, when this will be done and when they will receive a further communication from Northern Ireland Water.

Items remain open until all actions have been completed but will be closed back to the date of the holding response for reporting purposes when said actions have been completed.

When a date by which investigations or further actions will be complete cannot be given, we will give the date by which we will contact the customer again.

Holding responses can be issued in writing or provided verbally by telephone.

Repeat Contact

Where a complaint has been responded to and results in a period of correspondence each written contact is treated as, and reported as, a separate complaint.

No complaints have been excluded from DG7 where Northern Ireland Water consider the complaint has been dealt with as far as possible.

Consumer Council for Northern Ireland (CCNI)

Complaints received in writing via CCNI will be logged as complaints and recorded in DG7 figures. All complaints from CCNI are received in writing by email.

CCNI enquiries and follow-up questions are not recorded as complaints.

Changes to original categorisation

Open contacts can be re-categorised using Rapid screen wccm11 (Contact Amendments), and closed contacts can be re-categorised using Rapid screen wccm91 (Close Date Maintenance).

There are a number of stages at which the categorisation of a written contact can be reviewed after it has been scanned, logged and indexed.

Whilst not exhaustive, the main activities during which the categorisation of contacts is regularly checked are:

- Agent Review - it is the responsibility of the Account Services Agent to ensure that each written contact they are handling is closed in line with reporting guidelines. On initial review, they should ensure that the contact has been correctly categorised in line with the DG/Contact definitions. If incorrect, it is their responsibility to ensure that the contact is updated on Rapid accordingly. If unsure, they should seek guidance from their line manager.
- MI & Data Team Sampling – the MI & Data Team within CSD Services performs monthly sampling on closed DG6, DG7 and non-reportable contacts. The sampling results are sent to the Account Services Mgmt. Team (ASMTM) for review. It is the responsibility of the ASMTM to ensure that any agreed exceptions that require re-categorisation are retrospectively updated on Rapid.
- ASMTM Coaching – Members of ASMTM perform coaching using sampling of closed contacts. It is the responsibility of the ASMTM to ensure that any contacts identified through this process that require re-categorisation are updated on Rapid.

Exclusions

A total of 781 written customer complaints have been excluded from DG7 reporting during 16/17 for a variety of exclusion reasons as per the Level of Service Methodology.

Campaign-led activity heavily contributed to this volume:

- Woodburn – 118 complaints were generated in relation to activity in Woodburn Forest including objections to the Exploration Agreement with Intrastata. A number of the complaints were identical in content with the exception of the signatory – these were

sent by email and by letter. A Campaign's Facebook page provided the wording to supporters and inviting them to write to Sara Venning (CEO).

- Portavoe Reservoir – 657 complaints generated in relation to objections to the sale of one of Northern Ireland Water's assets; the disused Portavoe Reservoir. The complaints are mainly identical in content with the exception of the name and email address – these were sent by email to Sara Venning (CEO) and Len O'Hagan (Chairman), generated by a campaign website.

The Utility Regulator was sighted on both of these campaigns and the associated complaints. Agreement was reached that these should be excluded from DG7 reporting.

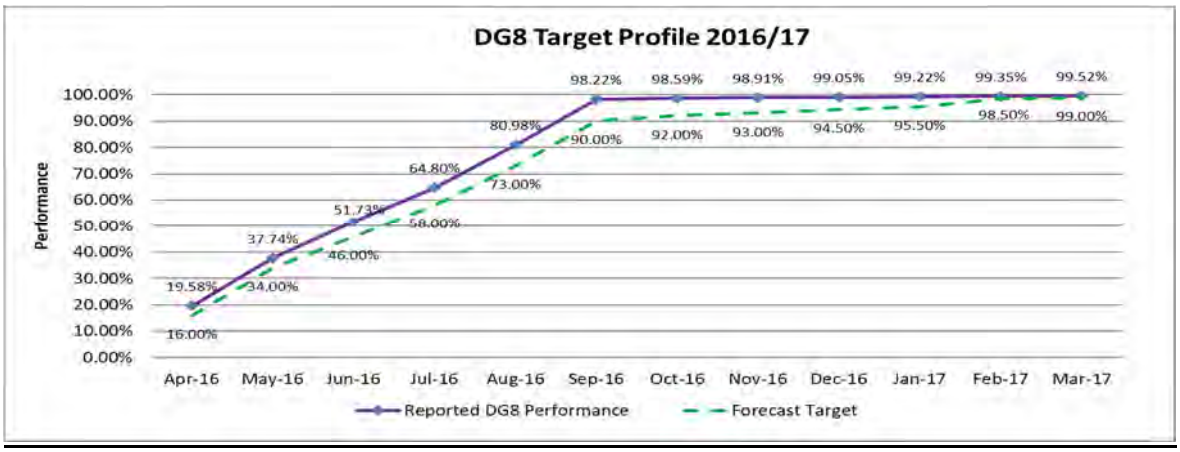
Confidence Grades

The confidence grades assigned to lines 1-5, as shown below, remain the same as those assigned to the 2015/16 performance figures:

1	Total written complaints	B2
2	Number dealt with within 10 working days	B2
3	Percentage dealt with within 10 working days	A1
4	Number dealt with in more than 20 working days	B2
5	Percentage dealt with in more than 20 working days	A1

Lines 6-12 DG8 – Bills for metered customers

The 16/17 outturn for DG8 was 99.52% of meters read and billed. This was against a target of 99%. Although the company was well ahead of target within the first 6 cycles, achieving the target of 99%. The target for 17/18 remains fixed at 99%.



Graph 1.0 Cumulative increase in DG8 reads throughout the course of the 16/17 year. The graph is based on actual meter reads out of the total meter stock base.

As can be seen from graph 1.0, within the first read cycle, 98.22% of the meters contributing to the DG8 target were read, against an internal company target of 90.00%. Within the second half of the year the continuing targeted approach and skip management has resulted in a significant improvement in the number of skips of 328 for 2016/17 from 2303 for 2015/16, this has been due to a number of factors including;

- Team set up to focus on reducing skips by managing in month, with proactive management of meter maintenance to ensure meters are replaced asap.
- Proactive engagement with customers to get access to meters to get actual read.
- Identification of 552 domestic meters to be reclassified to annual read cycle.

Automatic Meter Reading (AMR) equipment was trialed in 16/17 with small sample, a further 1200 AMR's will be introduced in 17/18 and monitored to help inform the future metering strategy.

Billing Policy

Frequency of Bill Issue:

- Household properties – the Company do not bill household meters at present.
- Non-household – the Company aim to read twice a year and bill twice yearly.
- Large non-household users – the Company aim to read and bill monthly.

Customer Reads

The Company encourages our customers to take readings themselves so that they are aware of their usage. The company continues to but a message on bill and recovery envelopes to highlight the importance of customers ensuring they check and read their own meter where possible. Customer reads can be registered for billing purposes by using the On-line facility available on our website, email or by calling our billing line.

Exclusions

Based on data extracted on 3rd May 2017 from Rapid Xtra:

- 59,428 Meters were excluded in 16/17.

The company can exclude any unusual accounts or unusual circumstances that complicate the measure. The following are excluded from the indicators:

- Charged on another basis (not metered consumption)
- Test meters
- Trade-effluent meters
- DRD or NIW meters
- Fire supplies
- Properties occupied continuously for less than six months
- Complex accounts – Including combination meters i.e. the 'low-flow' element is excluded.
- Void properties

The table below illustrates the numerical breakdown and reason for Meters Excluded in 16/17:

Reason for exclusion	Count of Exclusions	% of of Total Exclusions
Charged on another basis	56568	95.19%
Void Property/No Occupier	2425	4.08%
New Property	248	0.42%
Occupied < 181 consecutive days	187	0.31%
Grand Total	**59428**	**100.00%**

For 16/17 the total meters excluded has risen by 3,553 compared to the total exclusion reported in 15/16, this is in line with an increase of 4,044 household accounts being reported for 16/17.

Confidence Grades

The confidence grade is assigned based on the system driven DG8 summary reports extracted from RapidXtra, the reports are analysed in Rapid to create DG8 Meter Summary

Analysis reports and does not require any manual manipulation. Rapid automatically categories each account based on its status using the most current and up to date data.

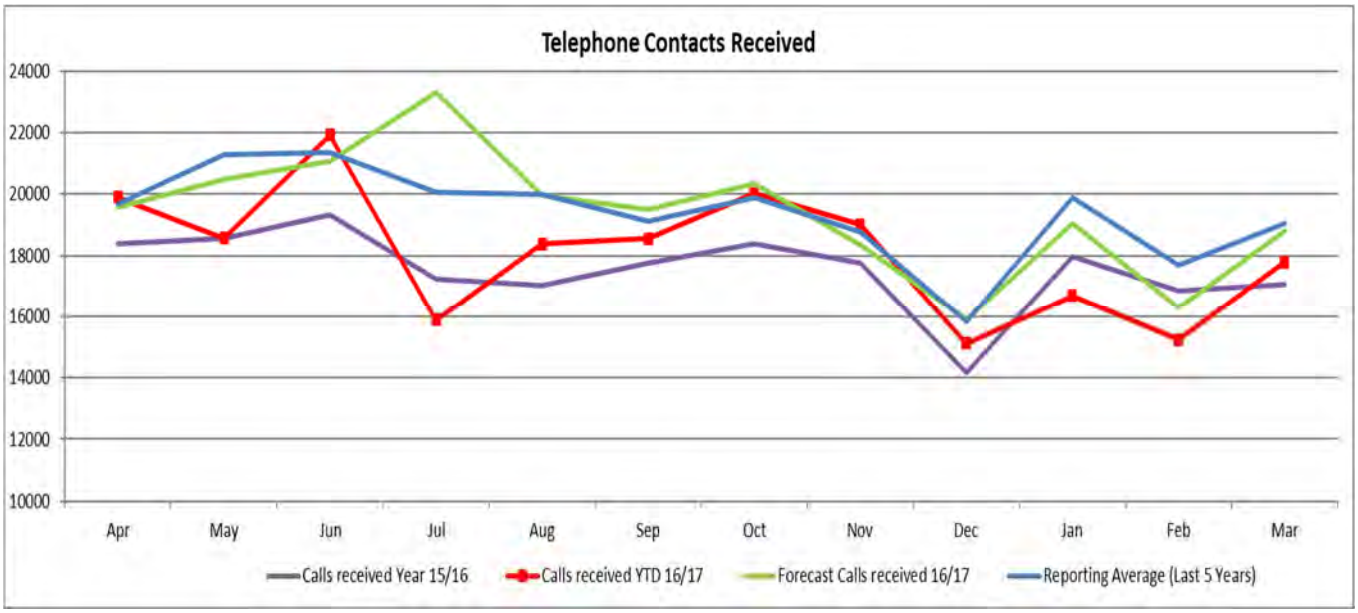
The confidence grades assigned to lines 6-12, as shown below, remain the same as those assigned to the 2015/16 performance figures:

6	Total Meter Accounts	A1
7	Metered accounts excluded from indicator	A1
8	Company readings	A1
9	Company or customer readings (or both)	A1
10	Estimated bills only	A1
11	No bills received during the report year	A1
12	Unread by company for 2 years	A1

Lines 13 – 17- DG9 Telephone Contact

DG9 Introduction

During the reporting year a total of 217,023 calls were made to the advertised Company telephone numbers.
Graph 1 shows a comparison against the previous year (2015/16) and against our target level of calls for the year and the 5 year average.



Graph 1: Telephone Contacts Received

The deployment of an High Volume Call Answering (HVCA) solution in NI Water is unique in the water industry, providing an enhanced customer experience and improved incident management when compared to other water companies in UK and on a par with other utilities in Northern Ireland i.e. Power NI. HVCA was available to handle overflow calls for customers reporting faults on the Waterline.
Call received in the winter period where lower in comparison to previous years, due mainly to milder weather conditions.

Line 14 - All Lines Busy

There were 63 instances of All lines busy during the reporting year 16/17. During August 2016, All lines busy peaked at 19. On the 9th August 2016, 12 engaged calls were identified

from Waterline and Billing, at this time there were no agent log-in errors or sufficient calls to cause a genuine engaged call. As a result, BT where investigating the fault, which lead to the engaged calls and due to 'congestion' on the line, a fault with BT's network in general there, were no legitimate engaged calls.

HVCA

The High Volume Call Answering (HVCA) system was driven from the events in winter 2010-11, where prolonged sub-zero temperatures during December 2010, followed by a sudden thaw on 26th December 2010, caused extensive disruption of supplies (due mainly to bursts on customer supply pipes) and huge increase in customer contacts to the NI Water Customer Relations Centre.

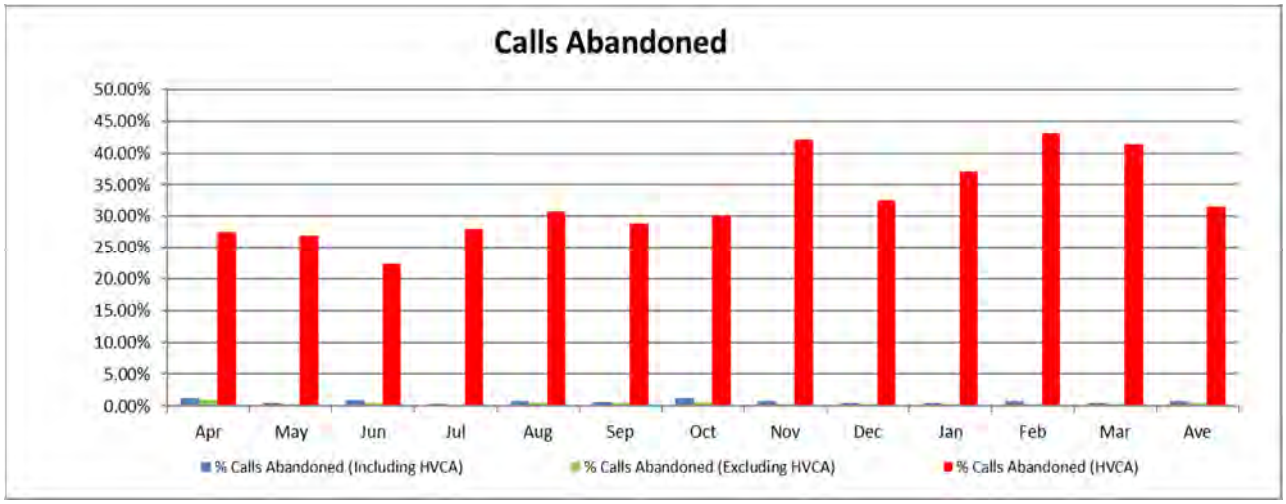
Since the 5th March 2013, the HVCA system has been deployed in Agent First Mode, which means all calls to the Waterline are still diverted to the Cable and Wireless Network IVR system. The caller is presented with the menu selection and depending on the option selected and if a CRC agent available, passed to a CRC call Agent. If no Agents are available then the caller will enter into the HVCA call routing plan to have their issue logged.

Lines 15 - Calls Abandoned

There were 1008 calls abandoned on the CallMedia system during the year leading to a reportable Company performance of 99.54% of 'calls not abandoned', which exceeded the 99% target set for the year.

All calls abandoned on HVCA are now classified as answered due to agreement with the Regulator and CCNI. However, for monthly Business and annual Regulatory reporting purposes all calls handled by HVCA continue to be analysed and reported as answered or abandoned using the agreed hang up location methodology. NI Water is able to classify each hang up location as either 'answered' if the caller has reached a point in the call flow at which they can hear a salient message or 'abandoned' as HVCA has 226 distinct hang up locations allowing for detailed analysis of where the customer call ended and what messages the customer was presented with. There were an additional 689 abandoned on the HVCA system and the details on calls abandoned, including and excluding the HVCA system, are set out in Table 1 in Annex A.

As reported previously to the Regulator, 31.49% of all calls transferred to the HVCA system are being abandoned due primarily to customers hanging up on hearing the automated system and redialling in the likelihood that they will be answered by an agent.



Graph 1.1 Call Abandoned 2016 – 2017

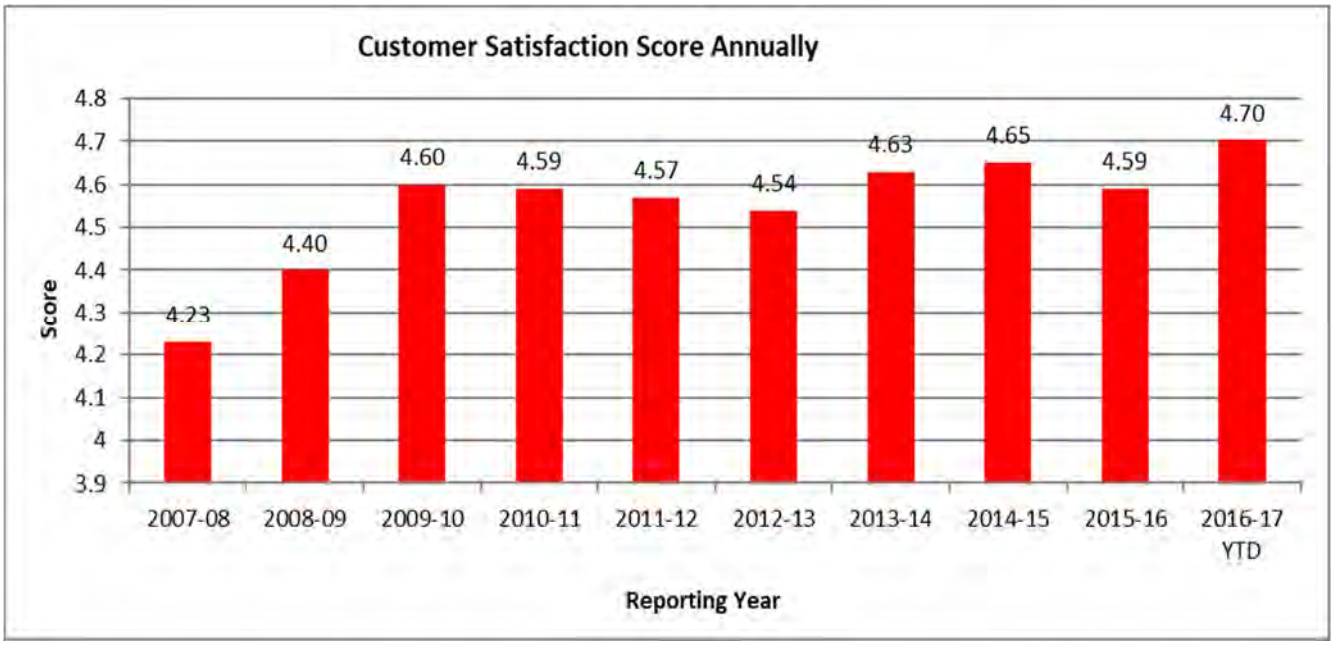
Line 16 - Call Handling Satisfaction

Customer's satisfaction with regards call handling is assessed independently by Allto, a market research company who has also undertaken similar call satisfaction assessments in England and Wales.

Allto carry out quarterly customer surveys of 100 customers who have called the Company for any reason. Allto will email Echo MI and Data team in advance to notify which week's data will be required. The data set is produced using Call Media, a call media comprehensive report that has been created to return a date set, which includes "All Users and "All inbound calls" for the required date range.

It has been agreed with the Utility Regulator and NI Water that OPA is no longer required. Therefore, the Company achieved an overall score of 4.70/5.0 at the end of Quarter 3.
Graph 2 illustrates the quarterly scores for 2016/17 and Graph 3 illustrates the overall average for each year since 2007/8:

Graph 2 – Customer Satisfaction Score 2016 -2017



Graph 3 –Customer Satisfaction Score Annually

The company analyses this research to determine areas of customer dissatisfaction, identifying root causes and proposing plans for corrective action and increased customer satisfaction.

The Company has also commenced qualitative surveys using the SIM methodology, which is based on a survey of 800 resolved contacts per annum. The Company is engaged with the Utility Regulator and other key stakeholders in developing a new Customer Satisfaction measure for the PC15 period, based on a Net Promoter Score (NPS) approach.

Samples of calls are listened to on a monthly basis and any issue feed back to our outsource partners Echo through the monthly operational reporting mechanism.

In addition to this and in line with all other UK water companies NI Water employs McCallum Layton to survey 100 and 200 customers who have called the Company each quarter for OPA and SIM CSAT qualitative reporting.

Line 17 - Telephone Complaints

Telephone complaints cover any telephone call from a customer or a customer's representative (e.g. Citizens Advice Bureau, solicitor) alleging that an action or inaction of the Company, or a service or lack of service provided by NI Water or agent/contractor has fallen below his/her expectation.

General statements of complaint are also counted. Customers may complain unfairly or unjustifiably; nevertheless, such calls are classed as complaints. Some complaints may be frivolous or vexatious, nevertheless these are reported.

As a general policy, the Company records telephone calls about the following water service issues as complaints: no water, lack of pressure, leaks, taste and odour, discoloration and hard water (except for simple enquires e.g. dishwater settings). Telephone calls about the following wastewater services are also recorded as complaints: sewer flooding other than those received through NI Direct/blockages, collapsed sewers/manholes, smells from sewage treatment works/pumping stations and flies from sewage treatment works.

Telephone complaint volumes have risen to 62,866, a slight increase compared with the 61,316 received during 2015/16 reporting period.

Line 18 – Customers on the Critical Care Register

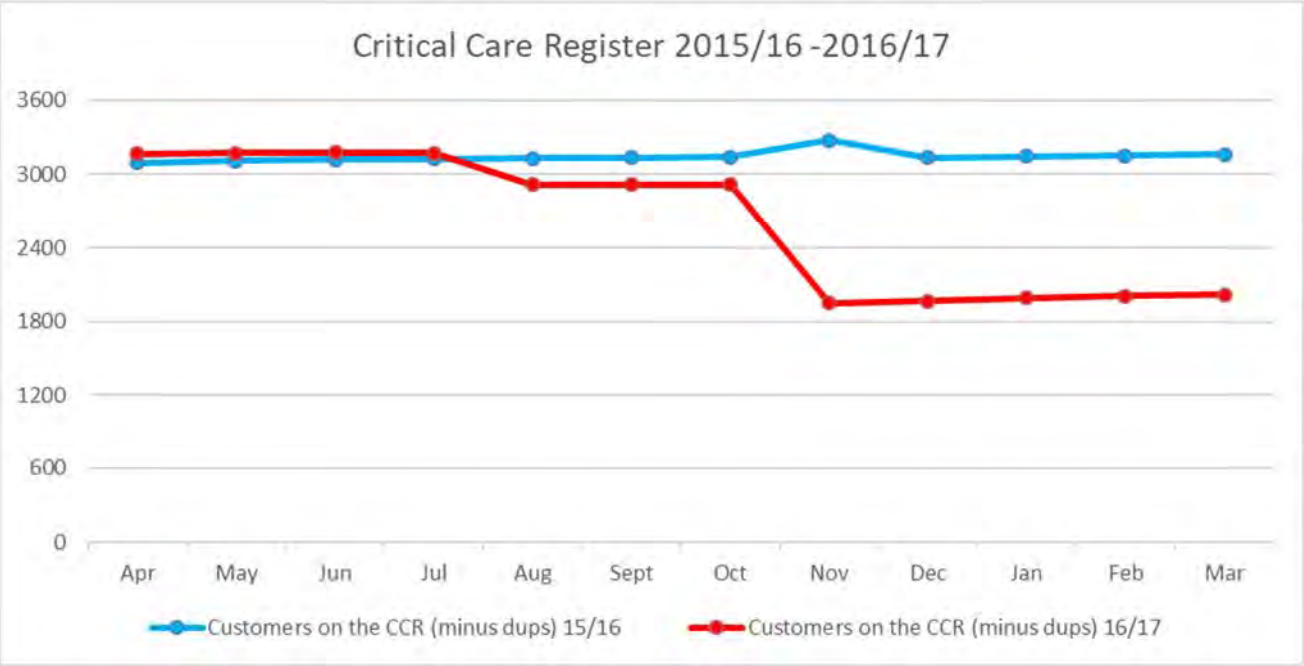
The Critical Care Register offers a range of free additional services to customers who are older, have a disability, a serious medical condition or require extra help when experiencing an interruption to their Water Supply.

A bespoke CorVu report has been created in conjunction with NI Water code of Practice - “Priority Services for Domestic Services” to report on Critical Customers. The report has been created with predefined filters to only return customers registered against the special needs listed below:

Special Needs Code	Need Description
01	Require Braille - Blind/partially sighted
02	Require Audio - Blind/partially sighted
03	Deaf
04	Vocally Impaired
06	Large Print Bill - Learning/Reading difficulties
07	Dialysis patient
08	Vulnerable
11	Nursing Home

Customers who are registered for multiple medical conditions will only be reported on once, except for when the customer is a Nursing Home or Hospice.

At the end of 16/17 reporting year 2,017 customers were registered on the Critical Care Register, this has reduced significantly compared to the reported 3,163 for 15/16.



Graph 4 – Critical Care Register

As part of an AIR 16 audit recommendation (for Table 5 Line 18), it was recommended that "NI Water review how they promote the scheme to ensure those with Special Assistance requirements are aware of the Company's scheme."
Under the terms of the CBC contract Echo are committed to undertaking a mid-year review to proactively contact those on the Customer Care Register. Those customers who:

a) Joined the register many years ago
b) Who have no history of contact since then
c) Who have not responded to the recent outbound contacts are to be removed from the register.
d)

As part of the contract renewal with Echo which commenced in Spring 2015, Echo had proposed to carry out an Annual review of the Critical Care Register. The exercise was undertaken between August 16 and September 16, there was a significant reduction in the number of customers on the CCR register as illustrated in Graph 4.

The mid-year review is completed by telephone and if there is no response to the outbound contact it is then followed up in writing, the letter will stimulate the customer has 4 weeks to provide an update. If no response has been received by the company and the customer has not been in touch with the company since registering on the register then the decision is made to remove the customer from the register.

The initiative is intended to build a relationship with those customers on the CCR and also to confirm the validity of the contact details recorded.

During presentations in 2017 to all the eleven new "super" councils, NI Water took the opportunity to promote our customer care scheme. NI Water also continue to work closely with other Utilities through CCNI and NIAUR to ensure a common approach to promoting Customer Care schemes.

An annual Newsletter is produced every November and is sent out to customer currently on the Critical Care Register, to remind customers of the service available and for them to inform other potential critical customers of the service available.

Customer Satisfaction Measures
Lines 19 to 21 – Total Contacts and Unwanted Contacts
Total contacts refers to the number of Telephone (Billing) and Operational telephone contacts the company has received from Customers during the reporting year 16/17. During the reporting year 257,866 telephone contacts where received. The figure is obtained from the all received and calculated using the original CMS contacts logged within Rapid.

The table below illustrates the monthly breakdown of the total telephone contacts received for 2016/17:

Month Recd	Grand Total
April	23251
May	22329
June	25788
July	18848
August	22221
September	22130
October	23595
November	22679
December	17479
January	19717
February	18368
March	21461
Grand Total	**257866**

During the reporting year 16/17 a total of 257,866 contacts where received, 110,197 of those contacts where unwanted.

An Unwanted phone contact definition is the number of phone contacts received from customers that are ‘unwanted’ from the customer’s point of view. This includes a contact about an event or action that has caused the customer unnecessary aggravation (however mild). It also includes repeat or chase calls by the customer to the company. This is determined by the subject matter of the call.

The table below illustrates the breakdown of Wanted and Unwanted contacts received in 16/17:

Month Rec'd	Unwanted	Wanted	Grand Total
April	9693	13558	23251
May	9092	13237	22329
June	11854	13934	25788
July	8297	10551	18848
August	9174	13047	22221
September	8899	13231	22130
October	10550	13045	23595
November	9147	13532	22679
December	7960	9519	17479
January	8685	11032	19717
February	8179	10189	18368
March	8667	12794	21461
Grand Total	**110197**	**147669**	**257866**

Based on the total unwanted telephone contacts received by the company, 76,495 are relating to Sewerage Services and 66,902 are relating to Water Services.

The top Sewerage Service unwanted contact for 16/17 is *'St Annual Empty Request',* with a total of 35,307 (32%) of unwanted customer contacts.

The top Water Service unwanted contact for 16/17 is '*No Water Complaint',* with a total of 22068 (20%) of unwanted customer contacts.

Line 22 – First Point of Contact

During the reporting year 66.52% of contacts where resolved at First Point Of Contact, this is a slight reduction compared to 67.79% reported for 15/16.

When a contact requires an action and this action is completed at first point of contact and there is no repeat contact from the same property on the same issue within a 90 day period then it shall be counted as 'First Point of contact resolution'.

First point of contact resolution is reported as a percentage derived from the expression of FPOCR against the number of Contacts. The dataset is an analysis of Original CMS code data from the Diamond and CorVu reports, the following will be excluded from the count:

- Outbound CMS
- Non – Reportable
- CMS logged to Switchboard customer Numbers

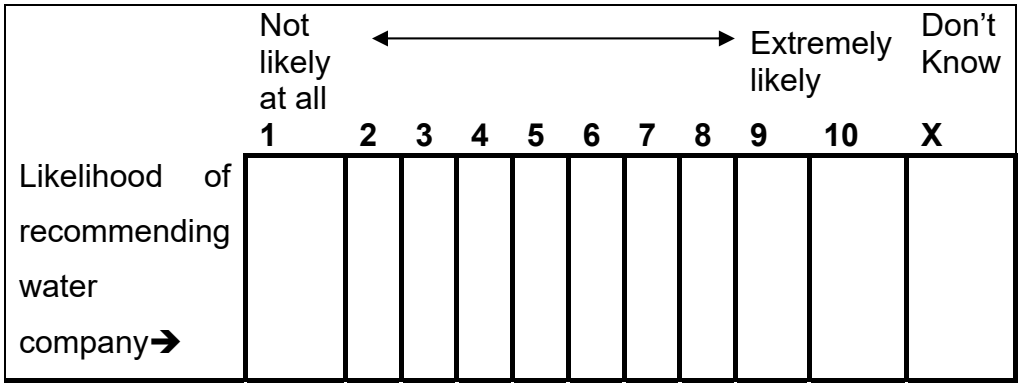
A total of 273,725 contacts where resolved at FPOC:

FPOCR Category	Count
Metering & Billing	94575
Other Activities	27675
Sewerage Services	82190
Water Services	69285
Grand Total	**273725**

Line 23 – Customer Advocacy measure

Customer advocacy is an annual satisfaction score assessed by Allto (McCallum Layton), an independent market research company. Allto carry out quarterly surveys (Waves) of customers who have contacted the company for any reason. The objective of the research is to capture the views of those customers who have had dealings with the company, not only through the main contact centre but to any part of the business.

Customers are asked "*Likelihood of recommending Northern Ireland Water 1-10?"*
The score is calculated using Net Promoter Score methodology based on results from the following statement; if people could choose their water company how likely would you be to recommend your water company to a friend or colleague where 1 is 'not at all likely to recommend' and 10 is 'extremely likely to recommend'



Customer Advocacy is calculated: Promoter % - Detractor %

The survey is based on a sample of resolved contacts only (from telephone and written channels) in relation to both billing and operational areas. Allto will issue an email in advance to notify which week's data will be required. The sample data set is obtained from a bespoke CorVu report entitled 'SIM Resolved Contacts Query LIVE with date prompt', which was created by NIW.

Due to field configuration and system limitations within Rapid, there is no current field that will report the 'Resolution Date'. The closed date field is often populated with the date a holding letter is issued, which is typically within 5/10 working days and aligns with DG6/7 SLAs; however the contact may have been open for longer. The actual closed date field can include the last date a contact was amended, therefore not necessarily the actual date of resolution. The Closed Date and Actual Closed Date are aligned to give the Resolution Date.

Line 24 - Omnibus survey question 1

Millward Brown is an independent market research company, who carry out customer surveys on behalf of many other clients, including Regulators, Councils and Utilities.
The objective of the research are to survey a sample of domestic and non-domestic customers who have contacted NI Water and therefore to confirm their level of customer satisfaction and if there is any correlation in the level of satisfaction between customers who contact NI Water and those who don't.

The survey has to be sufficiently robust and statistically significant to enable benchmarking within multiple markets. The score is calculated from an average of overall satisfaction with the following statement: *'I am satisfied with the services provided by NI Water'*. (1- very dissatisfied, 5 - very satisfied).

The Omnibus survey is based on a sample of 1000+ domestic consumers and 200 non-domestic consumers that have had no direct contact with NI Water to request a service or make a complaint. The survey is carried out once a year every September.

Each domestic survey consists of a freshly drawn sample of 1000+ adults aged 16+ (with each interview representing one household). The sample is quota controlled to represent the Northern Ireland population in terms of gender, age and social class. 60 sampling points (spread over 110 electoral wards) are drawn using a stratified random sampling method to ensure that the sample is representative in terms of region. The survey is conducted face to face and data collected by means of a CAPI Methodology using Hand Held devices (HAPI). Each non-domestic survey is conducted via telephone. The survey is derived from a random sample of businesses in Northern Ireland, with quotas applied to ensure that the survey mirrors the profile of the Northern Ireland business community insofar as this is possible, building quota requirements by region with a view to ensuring maximum geographical representativeness. Given that the data may be subject to media and public scrutiny the sample is controlled by industry sector and number of employees to ensure broad representativeness, although it is possible to add further area quota controls to the overall sample stratification. Throughout the course of the fieldwork, geographic analysis would be monitored, to ensure representation is being achieved.

Consumers are asked to what extent do you agree or disagree with the following statement? ‘I am satisfied with the services provided by NI Water’.

Strongly agree	1
Tend to agree	2
Neither agree nor disagree	3
Tend to disagree	4
Strongly disagree	5
Don’t know	6

The survey data suggests strong levels of endorsement of water services in Northern Ireland with four fifths (81%) of domestic customers agreeing that they were satisfied. There has been no change in the level of satisfaction since 2015 when the same proportion agreed with the statement 'I am satisfied with the services provided by NI Water‘.

Line 25 - Omnibus survey question 2

Millward Brown is an independent market research company, who carry out customer surveys on behalf of many other clients, including Regulators, Councils and Utilities.

The objective of the research are to survey a sample of domestic and non-domestic customers who have not contacted NI Water and therefore to confirm their level of customer satisfaction and if there is any correlation in the level of satisfaction between customers who contact NI Water and those who don’t.

The survey has to be sufficiently robust and statistically significant to enable benchmarking within multiple markets.

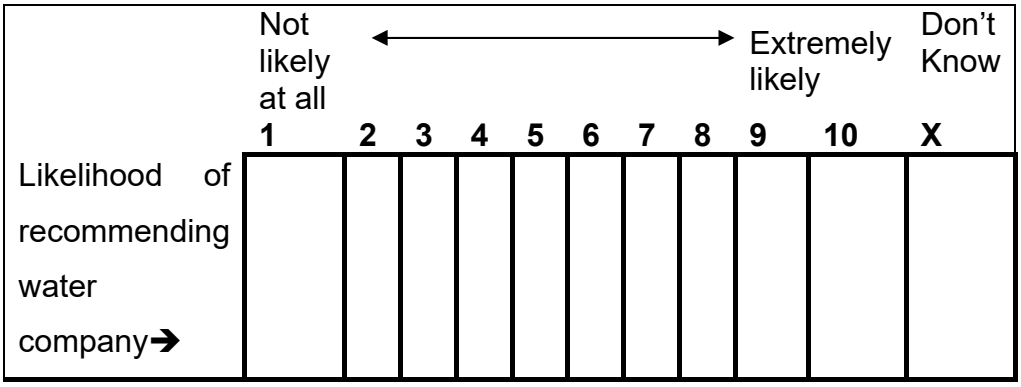
The score is calculated using Net Promoter Score methodology based on results from the following statement; if people could choose their water company how likely would you be to recommend your water company to a friend or colleague where 1 is ‘not at all likely to recommend‘ and 10 is ‘extremely likely to recommend’

The Omnibus survey is based on a sample of 1000+ domestic consumers and 200 non-domestic consumers that have had no direct contact with NI Water to request a service or make a complaint. The survey is carried out once a year every September.

Each domestic survey consists of a freshly drawn sample of 1000+ adults aged 16+ (with each interview representing one household). The sample is quota controlled to represent the Northern Ireland population in terms of gender, age and social class. 60 sampling points (spread over 110 electoral wards) are drawn using a stratified random sampling method to ensure that the sample is representative in terms of region. The survey is conducted face to face and data collected by means of a CAPI Methodology using Hand Held devices (HAPI).

Each non-domestic survey is conducted via telephone. The survey is derived from a random sample of businesses in Northern Ireland, with quotas applied to ensure that the survey mirrors the profile of the Northern Ireland business community insofar as this is possible, building quota requirements by region with a view to ensuring maximum geographical representativeness. Given that the data may be subject to media and public scrutiny the sample is controlled by industry sector and number of employees to ensure broad representativeness, although it is possible to add further area quota controls to the overall sample stratification. Throughout the course of the fieldwork, geographic analysis would be monitored, to ensure representation is being achieved.

The score is calculated using Net Promoter Score methodology based on results from the following statement; if people could choose their water company how likely would you be to recommend your water company to a friend or colleague where 1 is ‘not at all likely to recommend‘ and 10 is ‘extremely likely to recommend’



The degree of endorsement given by the non-domestic market is similar albeit at a slightly lower level (77%). Again, we see little or no change compared with previous year’s survey when 78% of respondents agreed that they are satisfied.

NI Direct Flood Line

NI Direct Floodline (FIL) was launched on 30 January 2009, as a single contact telephone number for customers in the event of a flooding incident. This telephone number is not one of NIW’s advertised PACC numbers and is provided through a separate Call Centre managed by NI Direct.

NI Direct operate as a ‘triage’ service, taking the details of the incident from the customer and directing their issue to the relevant agency for appropriate action. Following a change in supplier within NI Direct during 2012/13, the integrated interface between FIL and NI Water systems was severed creating a gap in the process which NI Water were forced to

bridge. This resulted in FIL contacts being received by e-mail and manually logged onto the NI Water CRC system by agents.

The new FIL contract went live on 1st December 2012, and following some initial manual logging the automated connection went live on 9th July 2013 between the FIL CRM and Rapid, in order to ensure that customer contacts relevant to NIW are logged on Rapid and work orders processed via Ellipse where necessary.

During the reporting period circa 352 work orders were received by the Company from FIL.

Confidence Grades

Call volume data is derived using a combination of telephony systems, the HVCA system for automated calls and Call Media that draws information from the Avaya system for agent handled calls.

In March 2014, the Telephony supplier changed from Cable & Wireless to BT. This switch was relatively seamless, with only a minor impact on lines busy due to the technical handover and these calls were excluded for reporting purposes.

As per methodology, the process of reconciliation between the telephony systems is largely manual, as calls transferring from CallMedia are deemed to be received in HVCA; however, the confidence grade assigned to the data remains at ‘A2’, as per the AIR guidance.

Call Handling Satisfaction retains the confidence grade of ‘A2’ as it is conducted independently and the results are provided to NI Water by Allto.

Annex A

Table 1: HVCA (2016/17)

Calls received/answered to HVCA

Details	YTD	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17
Total calls received (HVCA)	**2188**	233	93	348	75	179	142	405	183	120	116	132	162
Total calls answered (HVCA)	**1499**	169	68	270	54	124	101	183	106	81	73	75	95
% Calls transferring to HVCA based on total calls received	**Ave 0.92%**	1.07%	0.46%	1.46%	0.43%	0.88%	0.70%	1.85%	0.88%	0.73%	0.63%	0.77%	0.82%

Abandoned on HVCA

Total of Abandoned Calls (Call Media)	**1008**	180	53	117	39	85	91	118	32	46	51	58	108
Total of Abandoned Calls (HVCA)	**689**	64	25	78	21	55	41	122	77	39	43	57	67
Total of Abandoned Calls	**1697**	244	78	195	60	140	132	240	139	85	94	115	175
% Calls Abandoned (Including HVCA)	**0.78%**	1.23%	0.42%	0.89%	0.38%	0.76%	0.71%	1.20%	0.73%	0.56%	0.56%	0.75%	0.56%
% Calls Abandoned (Excluding HVCA)	**0.47%**	0.90%	0.29%	0.53%	0.25%	0.46%	0.49%	0.59%	0.33%	0.30%	0.31%	0.38%	0.38%
% Calls Abandoned (HVCA)	**31.49%**	**27.47%**	**26.88%**	**22.41%**	**28.00%**	**30.73%**	**28.87%**	**30.12%**	**42.08%**	**32.50%**	**37.07%**	**43.18%**	**41.36%**

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

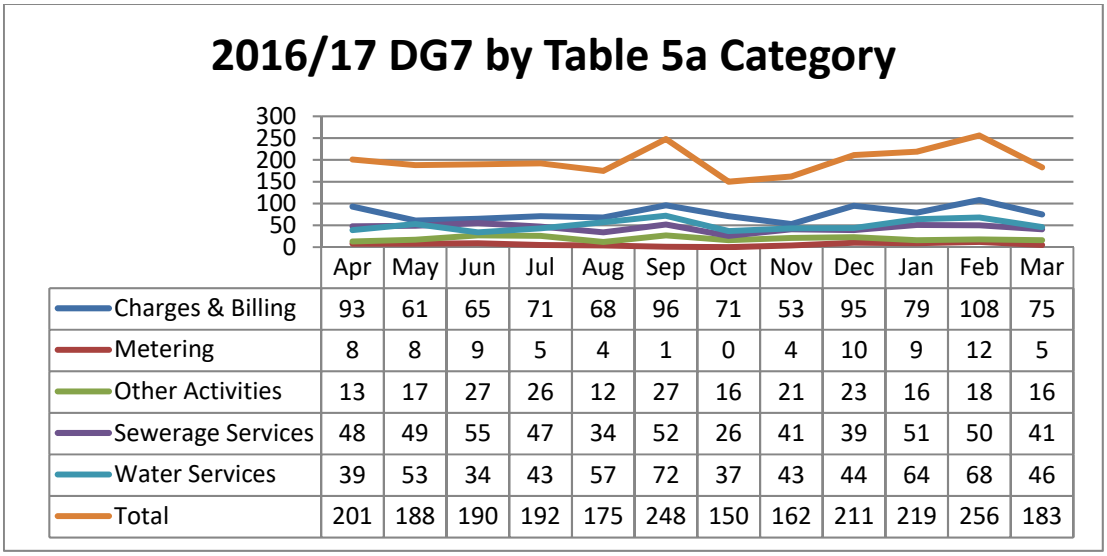
ANNUAL INFORMATION RETURN - TABLE 5A KEY OUTPUTS
CUSTOMER COMPLAINTS DATA FOR CONSUMER COUNCIL FOR NORTHERN IRELAND (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**TOTAL WRITTEN COMPLAINTS**																				
1	Total written complaints	nr	0	3,173	B2	2,505	B2	2,364	B2	2,269	B2	2,375	B2								
2	Number dealt with within 10 working days	nr	0	3,166	B2	2,498	B2	2,363	B2	2,266	B2	2,375	B2								
3	Number dealt with in more than 20 working days	nr	0	1	B2	2	B2	0	A1	2	B2	0	B2								
B	**CATEGORY OF WRITTEN COMPLAINTS**																				
	(i) Charges and Bills																				
4	Total written complaints about charging and billing issues	nr	0	1,567	B2	839	B2	906	B2	890	B2	935	B2								
5	Total written complaints about charging and billing issues escalated to second stage review	nr	0	381	B2	149	B2	124	B2	92	B2	87	B2								
	(ii) Water Service																				
6	Total written complaints about water service issues	nr	0	448	B2	552	B2	555	B2	505	B2	600	B2								
7	Total written complaints about water service issues escalated to second stage review	nr	0	71	B2	52	B2	52	B2	33	B2	29	B2								
	(iii) Sewerage Service																				
8	Total written complaints about sewerage service issues	nr	0	689	B2	493	B2	434	B2	487	B2	533	B2								
9	Total written complaints about sewerage service issues escalated to second stage review	nr	0	82	B2	42	B2	31	B2	29	B2	43	B2								
	(iv) Metering																				
10	Total written complaints about metering issues	nr	0	123	B2	133	B2	107	B2	104	B2	75	B2								
11	Total written complaints about metering issues escalated to second stage review	nr	0	25	B2	28	B2	11	B2	4	B2	5	B2								
	(v) Other activities																				
12	Total written complaints about other service issues or activities	nr	0	346	B2	488	B2	362	B2	283	B2	232	B2								
13	Total written complaints about other service issues or activities escalated to second stage revie	nr	0	82	B2	124	B2	51	B2	18	B2	14	B2								
C	**OTHER CUSTOMER RESPONSE MEASURES**																				
14	Number of holding responses issued	nr	0	695	B4	351	B4	294	B4	413	B2	326	B4								
15	Consumer Council investigations	nr	0	27	B2	40	B2	28	B2	34	B2	30	B2								

Table 5a – DG7 Response to Written Complaints

DG7 Received Annual Profile & Explanation

The volume of DG7 complaints received each month during 16/17 by type is shown in the chart below.



	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Charges & Billing	93	61	65	71	68	96	71	53	95	79	108	75
Metering	8	8	9	5	4	1	0	4	10	9	12	5
Other Activities	13	17	27	26	12	27	16	21	23	16	18	16
Sewerage Services	48	49	55	47	34	52	26	41	39	51	50	41
Water Services	39	53	34	43	57	72	37	43	44	64	68	46
Total	201	188	190	192	175	248	150	162	211	219	256	183

In line with previous years, those falling into the Charges & Billing category remain the principal written complaint type.

Above average complaint volumes falling into this category also contributed to the increased total complaints received in November 2016. The predominant reason recorded for these complaints was disputed liability for charges.

Second Stage Complaints

Systems remained in place to enable the reporting of complaints escalated to second stage review throughout 16/17.

It should be noted that the associated data does not highlight instances of the same customers sending further complaints on the same issue following a second stage complaint. Second stage complaints have not been analysed to determine whether they would be deemed upheld or unjustified by the Company.

Sampling audits were performed throughout the year to ensure accuracy of categorisation.

Other Customer Measures

Within the PC10 Final Determination, stakeholders agreed to introduce monitoring systems to allow reporting of:

- the number and frequency of repeat complaints; and
- the number and frequency of holding responses.

Whilst there is no data line to report on repeat complaints, those complaints reported as having been escalated to second stage review could be interpreted as representing the number of repeat written complaints.

Monitoring systems have been in place throughout the reporting period to support reporting on the number holding responses issued throughout 16/17.

System-based report data was used to derive the number of holding responses issued between 01/04/16 and 31/03/17.

The figure reported in Line 14 is the total recorded number of holding responses issued to customers during 16/17 owing to pending investigations linked to open DG7 contacts that were received in 16/17. It does not include holding responses issued within 16/17 in relation to DG7 contacts received in the previous reporting year.

The reported figure does not represent the number of singular DG7 contacts for which one or more holding response was issued.

In cases where the investigations were ongoing by the expiry date of the initial holding response, a further holding response will have been issued.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 6A BAD DEBT

OUTSTANDING REVENUE AND BREAKDOWN OF CUSTOMER SERVICES OPERATING EXPENDITURE (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**REVENUE OUTSTANDING - MEASURED HOUSEHOLDS**																				
	Lines 1 to 14 not used																				
B	**REVENUE OUTSTANDING - UNMEASURED HOUSEHOLDS**																				
	Lines 15 to 28 not used																				
C	**REVENUE OUTSTANDING - MEASURED NON HOUSEHOLDS**																				
29	Total revenue outstanding < 48 months (measured non households)	£m	3	7.972	A2	8.260	A2	8.739	A2	7.220	A2	7.305	A2								
30	Number of measured non households with outstanding revenue < 48 months	nr	0	15,348	A2	14,570	A2	14,645	A2	17,091	A2	11,715	A2								
31	Revenue outstanding < 3 months (measured non households)	£m	3	6.891	A2	7.189	A2	7.525	A2	5.530	A2	5.376	A2								
32	Number of measured non households with outstanding revenue < 3 months	nr	0	10,588	A2	10,053	A2	10,415	A2	10,405	A2	7,992	A2								
33	Revenue outstanding 3 - 12 months (measured non households)	£m	3	0.952	A2	0.928	A2	0.960	A2	0.758	A2	1.100	A2								
34	Number of measured non households with outstanding revenue 3 - 12 months	nr	0	2,925	A2	3,108	A2	2,815	A2	4,889	A2	2,368	A2								
35	Revenue outstanding 12 - 24 months (measured non households)	£m	3	0.012	A2	0.039	A2	0.088	A2	0.435	A2	0.446	A2								
36	Number of measured non households with outstanding revenue 12 - 24 months	nr	0	1,049	A2	911	A2	992	A2	1,142	A2	922	A2								
37	Revenue outstanding 24 - 36 months (measured non households)	£m	3	0.117	A2	0.104	A2	0.166	A2	0.497	A2	0.383	A2								
38	Number of measured non households with outstanding revenue 24 - 36 months	nr	0	786	A2	498	A2	423	A2	656	A2	433	A2								
39	Revenue outstanding 36 - 48 months (measured non households)	£m	3			0.000		0.000		0.000		0.000									
40	Number of measured non households with outstanding revenue 36 - 48 months	nr	0			0		0		0		0									
41	Revenue outstanding > 48 months (measured non households)	£m	3			0.000		0.000		0.000		0.000									
42	Number of measured non households with outstanding revenue > 48 months	nr	0			0		0		0		0									
D	**REVENUE OUTSTANDING - UNMEASURED NON HOUSEHOLDS**																				
43	Total revenue outstanding < 48 months (unmeasured non households)	£m	3	0.402	A2	2.627	A2	2.566	A2	2.604	A2	2.647	A2								
44	Number of unmeasured non households with outstanding revenue < 48 months	nr	0	1,542	A2	10,114	A2	9,302	A2	9,664	A2	8,881	A2								
45	Revenue outstanding <3 months (unmeasured non households)	£m	3	0.111	A2	2.349	A2	2.350	A2	2.282	A2	2.351	A2								
46	Number of unmeasured non households with outstanding revenue < 3 months	nr	0	155	A2	8,826	A2	8,591	A2	8,224	A2	8,102	A2								
47	Revenue outstanding 3 -12 months (unmeasured non households)	£m	3	0.025	A2	0.165	A2	0.070	A2	0.154	A2	0.132	A2								
48	Number of unmeasured non households with outstanding revenue 3 - 12 months	nr	0	256	A2	697	A2	195	A2	190	A2	256	A2								
49	Revenue outstanding 12-24 months (unmeasured non households)	£m	3	0.241	A2	0.005	A2	0.116	A2	0.113	A2	0.116	A2								
50	Number unmeasured non households with outstanding revenue 12 - 24 months	nr	0	894	A2	184	A2	448	A2	662	A2	366	A2								
51	Revenue outstanding 24-36 months (unmeasured non households)	£m	3	0.025	A2	0.108	A2	0.030	A2	0.055	A2	0.048	A2								
52	Number of unmeasured non households with outstanding revenue 24 - 36 months	nr	0	237	A2	407	A2	68	A2	588	A2	157	A2								
53	Revenue outstanding 36 -48 months (unmeasured non households)	£m	3			0.000		0.000		0.000		0.000									
54	Number of unmeasured non households with outstanding revenue 36 - 48 months	nr	0			0		0		0		0									
55	Revenue outstanding >48 months (unmeasured non households)	£m	3			0.000		0.000		0.000		0.000									
56	Number of unmeasured non households with outstanding revenue > 48 months	nr	0			0		0		0		0									
E	**REVENUE WRITTEN OFF**																				
57	Amount of revenue written off from measured households	£m	3																		
57a	Amount of revenue written off from measured non-households	£m	3	1.094	A2	0.844	A2	0.666	A2	1.237	A2	0.341	A2								
58	Amount of revenue written off from unmeasured households	£m	3																		
58a	Amount of revenue written off from unmeasured non-households	£m	3	0.173	A2	0.094	A2	0.110	A2	0.083	A2	0.045	A2								
F	**CUSTOMER SERVICES OPERATING EXPENDITURE**																				
59	General customer services operating expenditure Total	£m	3	6.418	A2	6.767	A2	6.284	A2	6.337	A2	6.898	A2								
i	Employment costs	£m	3	3.673	A2	3.408	A2	3.188	A2	3.501	A2	3.972	A2								
ii	Hired and contracted costs	£m	3	3.139	A2	3.392	A2	3.188	A2	3.018	A2	2.876	A2								
iii	Other	£m	3	0.611	A2	0.739	A2	0.819	A2	0.738	A2	0.985	A2								
iv	Adjustments	£m	3	-1.005	B3	-0.772	B3	-0.911	B3	-0.920	B3	-0.935	A2								
60	Outstanding revenue collection operating expenditure (households)	£m	3																		
60a	Outstanding revenue collection operating expenditure (non households)	£m	3	2.118	DX	2.269	DX	2.242	DX	1.934	DX	1.950	A2								
61	Donations to charitable trusts assisting customers in debt (households)	£m	3																		
62	Operating expenditure due to vulnerable household customers	£m	3																		
63	Total customer services operating expenditure	£m	3	8.536	A2	9.036	A2	8.526	A2	8.271	A2	8.848	A2								

Table 6a – Bad Debt

Overview

The company operates a partnership with an external service provider (Echo) for customer contact and billing. Customer Services Delivery Directorate works closely with the supplier on all billing matters including debt recovery, designations of customers for write off of debt and estimation of the level of bad debt provisioning to be put in place for potential future write-offs.

The service provider furnishes monthly information for non-domestic measured water and trade effluent income, cash, write-offs, VAT and closing debtor balances to the company from the billing system (RapidXtra). This information is used to produce the monthly management accounts. The figures in Table 6a are derived from this information.

The figures contained within the table are clarified below:

Box A – Revenue Outstanding – Measured Households

For the year ended 31 March 2017, NI Water had no actual revenue from households as this is received by way of a subsidy from Department for Infrastructure ("DfI"). There was £1.37m due to NIW from DfI for subsidy at 31 March 2017. This figure varies to the Statutory Accounts as Septic Tank subsidy is not reported in AIR as it is classified as non-appointed income under UKGAAP.

Box B – Revenue Outstanding – Unmeasured Households

As above, income is received by way of a subsidy from DfI.

Box C – Revenue Outstanding – Measured Non-Households

Revenue outstanding from non-households is the amount of revenue relating to measured water, measured sewerage and trade effluent charges that had been billed in the year but not collected at 31 March 2017.

At 31 March 2017, the closing trade debtor balance was £7.305m. Trade Debtors decreased this year largely due to the setting aside of provisions against income to cover both recent back-billing as well as possible additional refunds arising from the TE review exercise.

The debtor balance reported figure is made up of various GL codes and is calculated as measured water and sewerage debtors (including Trade Effluent debtors) less unreconciled receipts, bad debt provision and provision for discount. The bad debt provision is £2.9m and is made up of the following:

- £0.2m for debt over 4 years
- £0.2m for debt 3 - 4 years
- £0.4m for debt 2 – 3 years
- £0.9m for debt 1 – 2 years
- £1.1m for debt 90 – 365 days
- £0.1m for debt less than 90 days

There is one GL code for measured water and sewerage debtors. At year end the GL debtor balance (gross of credit balances) was approx. £1.5m less than the detailed debtors listing provided by Echo. This was due to the following:

- Future system adjustments (£1.7m)
- Other adjustments £0.2m

Summary of all relevant rows for Section C

Row 29 – Total Revenue Outstanding < 48 months - Measured Non Households: The total amount of revenue at the end of 2016/17 outstanding from measured non-households for less than 48 months. Balance as at 31 March 2017 was £7.305m.

Row 30 – Number of Measured Non-Households with Outstanding Revenue < 48 months: The number of measured non-households with revenue outstanding for less than 48 months at 31 March 2017 was 11,715. The number of households has been adjusted in line with the decrease in debtors taking account of anticipated future system adjustments and other adjustments of £1.5m. The £1.5m is approximately 10% of total outstanding debtors at 31 March 2017 of £14.4m. An assumption was made to apply a 10% reduction across all measured revenue age groups up to 36 months.

Row 31 – Revenue Outstanding < 3 months (Measured Non Households): The total amount of revenue at the end of 2016/17 that has been outstanding from measured non-households for less than 3 months. Balance as at 31 March 2017 was £5.376m.

Row 32 – Number of Measured Non-Households with Outstanding Revenue < 3 months: The number of measured non-households at end of 2016/17, with revenue outstanding for less than 3 months. As at 31 March 2017, this totalled 7,992.

Row 33 – Revenue Outstanding 3-12 months (Measured Non Households): The total amount of revenue at the end of 2016/17 that has been outstanding from measured non-households for at least 3 months but less than 12 months. Balance as at 31 March 2017 was £1.100m.

Row 34 – Number of Measured Non-Households with Outstanding Revenue 3-12 months: The number of measured non-households at end of 2016/17 with revenue that has been outstanding for at least 3 months but less than 12 months. At 31 March 2017, this totalled 2,368.

Row 35 – Total Revenue Outstanding 12-24 months (Measured Non Households): The total amount of revenue at the end of 2016/17 outstanding from measured non-households for at least 12 months but less than 24 months. At 31 March 2017, this totalled £0.446m.

Row 36 – Number of Measured Non-Households with Outstanding Revenue 12-24 months: The number of measured non-households at end of 2016/17 with revenue that has been outstanding for at least 12 months but less than 24 months. At 31 March 2017, this totalled 922.

Row 37 – Total Revenue Outstanding 24-36 months (Measured Non Households): The total amount of revenue at the end of 2016/17 outstanding from measured non-households for at least 24 months but less than 36 months. At 31 March 2017, this totalled £0.383m.

Row 38 – Number of Measured Non-Households with Outstanding Revenue 24-36 months: The number of measured non-households at end of 2016/17 with revenue that

has been outstanding for at least 24 months but less than 36 months. At 31 March 2017, this totalled 433.

Row 39 – Number of Measured Non-Households with Outstanding Revenue 36-48 months: The number of measured non-households at end of 2016/17 with revenue that has been outstanding for at least 36 months but less than 48 months.

Once the bad debt provision is applied, there are no debtors greater than 36 months. Therefore, at 31 March 2017 this row and all remaining rows in box C are zero.

Box D – Revenue Outstanding – Unmeasured Non-Households
Revenue outstanding from non-households is the amount of revenue relating to unmeasured water and sewerage charges that had been billed in the year but not collected at 31 March 2017.

- At 31 March 2017 the closing trade debtor balance was £2.647m (31 March 2016, £2.604m).

The debtor balance reported figure is made up of unmeasured water and sewerage debtors less bad debt provision. The bad debt provision is £0.169m and is made up of the following:

- £0.013m for debt over 4 years
- £0.008m for debt 3 - 4 years
- £0.025m for debt 2 – 3 years
- £0.051m for debt 1 – 2 years
- £0.064m for debt 90 – 365 days
- £0.008m for debt less than 90 days

Summary of all relevant rows for Section D

Row 43 – Total Revenue Outstanding < 48 months - Unmeasured Non Households: The total amount of revenue at the end of 2016/17 outstanding from unmeasured non-households for less than 48 months. Balance at 31 March 2017 was £2.647m.

Row 44 – Numbers of Unmeasured Non-Households with Outstanding Revenue < 48 months: The number of unmeasured non-households at the end of 2016/17 with revenue that has been outstanding for less than 48 months. Total at 31 March 2017 was 8,881.

Row 45 – Revenue Outstanding < 3 months - Unmeasured Non Households: The total amount of revenue at the end of 2016/17 outstanding from unmeasured non-households for less than 3 months. Balance at 31 March 2017 was £2.351m.

Row 46 – Numbers of Unmeasured Non-Households with Outstanding Revenue < 3 months: The number of unmeasured non-households at the end of 2016/17 with revenue outstanding for less than 3 months. Total at 31 March 2017 was 8,102.

Row 47 – Revenue Outstanding 3-12 months - Unmeasured Non Households: The total amount of revenue at the end of 2016/17 outstanding from unmeasured non-households for at least 3 months but less than 12 months. Balance at 31 March 2017 was £0.132m.

Row 48 – Numbers of Unmeasured Non-Households with Outstanding Revenue 3-12 months: The number of unmeasured non-households at end of 2016/17 with revenue

outstanding for at least 3 months but less than 12 months. Total at 31 March 2017 was 256.

Row 49 – Revenue Outstanding 12-24 months - Unmeasured Non Households: The total amount of revenue at the end of 2016/17 outstanding from unmeasured non-households for at least 12 months but less than 24 months. Balance at 31 March 2017 was £0.116m.

Row 50 – Numbers of Unmeasured Non-Households with Outstanding Revenue 12-24 months: The number of unmeasured non-households at end of 2016/17 with revenue outstanding for at least 12 months but less than 24 months. Total at 31 March 2017 was 366.

Row 51 – Revenue Outstanding 24-36 months - Unmeasured Non Households: The total amount of revenue at the end of 2016/17 outstanding from unmeasured non-households for at least 24 months but less than 36 months. Balance at 31 March 2017 was £0.048m.

Row 52 – Numbers of Unmeasured Non-Households with Outstanding Revenue 24-36 months: The number of unmeasured non-households at end of 2016/17 with revenue outstanding for at least 24 months but less than 36 months. Total at 31 March 2017 was 157.

Row 53 – Revenue Outstanding 36-48 months - Unmeasured Non Households: The total amount of revenue at the end of 2016/17 outstanding from unmeasured non-households for at least 36 months but less than 48 months.

Once the bad debt provision is applied, there are no debtors greater than 36 months. Therefore, at 31 March 2017 this row and all remaining rows in box D are zero.

Box E – Revenue Written Off

Bad debt write-offs

The bad debt write off policy is detailed below. As with all other customer data, the company receives monthly figures for bad debt write-offs. The figure for the year is £0.386m (2015/16, £1.321m). The decrease is a combination of the mixed supply debt write-off and aged debt review exercise carried out in 2015/16, which resulted in a bad debt write-off of £0.9m, and also the improved cash collection in 2016/17, which meant that bad debt write-off in 2016/17, has been relatively low.

Authorisation of bad debt write-off

With regard to writing off bad debts, the service provider has authorisation to write off in accordance with the financial delegations.

Authorisation approval levels are as follows:

Delegation Limits [By Item]	Recommendation from (External service provider)	Approval required Grade (Internal)	DoF/DfI * (External)
Value			N/A
Up to £100	Agent	Billing, Revenue & Collection Manager L4.	
>£100 to £1,000	Team Manager		
>£1,000 to £5,000	Service Delivery Manager		

>£5,000 to £10,000	Head of Service Delivery	Billing, Revenue & Collections Senior Manager L3	
>£10,000 to £50,000		Director of Customer Service Delivery L2	
>£50,000		Chief Executive	
> £250,000	N/A	Board	>£500k

* All submissions for external approval must be submitted through F&R to the DfI SU.

Revenue written off is revenue relating to non-household water and sewerage charges along with any trade effluent charges that have been written off in the year.

Revenue written off only includes water, sewerage and trade effluent charges and does not include court costs or other items included.

NI Water uses a third party contractor to manage their debtors and a Debt Management Strategy was drawn up for Echo use to guide their actions and decisions.

Summary of all relevant rows for Section E

Row 57 – Measured Households: As NI Water receives no revenue from households, there was no revenue written off from measured households.

Row 57a – Measured Non-Households: Bad debts written off are calculated on a monthly basis and include trade effluent. The total for 2016/17 was £0.341m (2015/16, £1.237). The decrease is a combination of the mixed supply debt write-off and aged debt review exercise carried out in 2015/16, which resulted in a bad debt write-off of £0.9m, and also the improved cash collection in 2016/17, which meant that bad debt write-off in 2016/17, has been relatively low.

Row 58 – Unmeasured Households: As NI Water receives no revenue from households, there was no revenue written off from unmeasured households.

Row 58a – Unmeasured Non-Households: Bad debts written off are calculated on a monthly basis. The total for 2016/17 was £0.045m (2015/16, £0.083m).

Bad Debt provisioning

The methodology for calculating the bad debt provision is based on an analysis of industry specific bad debt, which banded specific industry types as high, medium or low risk in terms of collectability of debt. Percentages were then applied in terms of bad debt provision. Percentages for 'high risk' were set at an increased level and percentages for 'low risk' at a reduced level. The company view this methodology as providing an appropriate estimate of the provisioning required and reflects the current economic climate. NI Water's bad debt provision is calculated as follows:

Provision	0-30 days	31-60 days	61-90 days	91-120 days	121-150 days	151-180 days	180-365 days	1 - 2 years	2 - 3 years	3 - 4 years	4+ years
High	5%	5%	10%	10%	35%	65%	80%	100%	100%	100%	100%
Medium	2%	2%	2%	2%	20%	35%	65%	100%	100%	100%	100%
Low	1%	1%	1%	1%	10%	20%	30%	50%	75%	100%	100%

Allocation of High, Medium and Low

A review of the total debtors (debit balances) was carried out in July 2016. Account balance and aged debt taken into consideration when applying risk of default. Data was filtered by VAT SIC code and the following steps were taken:

- Top customers were reviewed by name.
- All public sector accounts reviewed e.g. Health Trusts, Education Boards, Schools - <30 days Low; if >30days, Med.
- Agricultural customers grouped and reviewed - >£5K reviewed individually and set to HIGH. £1k to £5k reviewed individually and set to HIGH if debt > 180 days, or MED if <180 days. DD customers low.
- Retail customers grouped and reviewed.
- Hotels, bars and restaurants reviewed - Final account no forwarding address – high risk.
- Charities, voluntary groups, housing associations, churches grouped and reviewed.
- Construction companies, quarries grouped and reviewed.
- Accounts with STD VAT code reviewed individually, direct debit payers on MED (these accounts are mainly new customers who have not yet completed VAT questionnaire, so we can't be sure of activity).
- Manufacturers grouped and reviewed by name (high value) and activity (lower value).
- Food processors grouped and reviewed.
- Unmeasured customers in sic code 6 classified as HIGH.
- Unmeasured customers in sic code 8 (Banks and professional services) classified as LOW or MED.
- Banks all at MED risk.
- All final accounts classified as HIGH risk.
- VAT code:
  - 1 Energy as low unless debt greater than £180 days then med.
  - 2 Minerals - <30days med. > 30 days high.
  - 3 Metal Goods and Engineering - DD - Low. >180days High
  - 4 Other manufacturing - >180 days high if not Key account or DD.
  - 5 Construction < 30 days med. > 30days high
  - 6 Distribution/Catering <30days Med. > 30days High
  - 7 Transport > 60days High. <60days med
  - 8 Banking & Finance - DD Low
  - 9 Other services:-
    - DD Low, >£1k, Med
    - Std Vat Rate unknown > 180 days high.
    - DD Med unless final a/c <180 days, if >£1k high.
    - Domestic Property - > 180 days high, <180days and <£100 low.
    - Redundant zero Vat - Med.
- Mitigation accounts set as HIGH
- RPA accounts set as HIGH.

Reduction in Provision

NIW provides against aged debt through the bad debt provision, applying a methodology based on age profile and industry. It is recognised that a proportion of the old debt will not in fact be written off as bad debt but will be eliminated via negative system adjustments and thus be a reduction in income rather than a bad debt expense.

Using the monthly analysis of system adjustments carried out, an estimate of the future system adjustments was made for measured water and measured sewerage only. This was done on the basis of the adjustments in previous months, resulting in an estimate of £1.7m of future system adjustments.

Bad Debt Provision Summary

The following is a summary of the bad debt provision at 31 March 2017 and 31 March 2016:

	2017	**2016**
	£m	**£m**
Measured water & sewerage	2.455	2.631
Unmeasured water & sewerage	0.350	0.115
Trade effluent	0.169	0.104
Total	**2.974**	**2.850**

Subsidy

NI Water received £265.0m subsidy in relation to household customers in 2016/17 with nothing outstanding from DfI at 31 March 2017.

NI Water received £15.38m subsidy in relation to non-household customers and at 31 March 2017, an amount of £1.36m was outstanding from DfI. The total subsidy for non-households for the year ended 31 March 2017 was £16.74m. This figure varies to the Statutory Accounts as Septic Tank subsidy is not reported in AIR as it is classified as non-appointed income under UKGAAP.

Lines 59 to 63 – Customer Services Operating Expenditure

Line 59 – General customer services operating expenditure

The line 59 total of £6.898m in AIR17 is a £0.58m increase (6.77%) against the costs of £6.337m in AIR16. This arises for the following reasons:

- Employment costs (increase of £0.5m (15%)).
- Hired and contracted costs (decrease of £0.1m (4%)).
- Other costs (increase of £0.2m (30%)).

Other costs have increased due to refurbishment work, which was carried out at Capital House in AIR17, in addition to the increased Capital House rental and service charge (4th and 5th floors). Furthermore, there was a review carried out on outbound calls from the Contact Centre.

Line 60 – Outstanding revenue collection operating expenditure (households)

As NI Water has no actual revenue from households, there is no revenue outstanding from households and therefore no operating expenditure for outstanding revenue collection.

Line 60a – Outstanding revenue collection operating expenditure (non-households)

The calculation of this figure was based on the split of the Gross Service Charge from Echo (Northern Ireland) Ltd. In addition, an estimate of some internal NIW collection costs was included.

Line 61 – Donations to charitable trusts assisting customers in debt (households)

There were no donations to charitable trusts assisting customers in debt in the year.

Line 62 – Operating expenditure due to vulnerable household customers

Household customers in Northern Ireland currently do not pay for water and sewerage services; therefore, NI Water issues no bills to 'vulnerable household customers'.

Line 63 – Total customer services operating expenditure

This agrees to the total of table 21, line 13 and table 22, line 12.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 7 NON FINANCIAL MEASURES
WATER PROPERTIES & POPULATION (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	PROPERTIES																				
1	Household properties connected during the year	000	3	4.154	B2	3.611	B2	4 224	B2	5.461	B2	6.327	B2								
2	Non-household properties connected during the year	000	3	0.195	B2	0.204	B2	0.26	B2	0.366	B2	0.319	B2								
B	BILLING																				
3	Households billed unmeasured water	000	3	681 095	A2	688.832	B2	694.934	A2	703.772	A2	717.015	A2								
4	Households billed measured water (external meter)	000	3	0 000	A1	0.000	A1	0 000	A1	0.000	A1	0.000	A1								
5	Households billed measured water (not external meter	000	3	0.000	A1	0.000	A1	0 000	A1	0.000	A1	0.000	A1								
6	Households billed water	000	3	681.095	A2	688.832	B2	694.934	A2	703.772	A2	717.015	A2								
7	Household properties (water supply area)	000	3	721 698	A2	729.182	B2	734 976	A2	743.090	A2	755.769	A2								
8	Non-households billed unmeasured water	000	3	10 896	A2	10.271	A2	9.589	A2	8.861	A2	8.602	A2								
9	Non-households billed measured water	000	3	69.158	A2	69.567	A2	69.645	A2	69.813	A2	70.150	A2								
10	Non-households billed water	000	3	80 054	A2	79.838	A2	79.234	A2	78.674	A2	78.751	A2								
11	Non-household properties (water supply area)	000	3	92.466	A2	92.286	A2	91 541	A2	90.796	A2	90.286	A2								
12	Void properties	000	3	53.015	A2	52.798	B2	52.350	A2	51.439	A2	50.288	A2								
C	POPULATION																				
13	Population - households billed unmeasured water	000	2	1,709.66	B2	1,718.73	B2	1,731.65	B2	1,747.72	B2	1,759.07	B2								
14	Population - households billed measured water	000	2	0.00	A1	0 00	A1	0.00	A1	0 00	A1	0.00	A1								
15	Population - non-households billed unmeasured water	000	2	7.11	B3	6.78	B3	6.49	B3	4.47	B3	4.40	B3								
16	Population - non-households billed measured water	000	2	102.7	B3	102.28	B3	102.4	B3	98 08	B3	98.11	B3								
17	Population - total	000	2	1,819.47	B2	1,827.79	B2	1,840.54	B2	1,850.27	B2	1,861.58	B2								

Table 7 – Water Properties and Population

Introduction

Table 7 focuses on the number of properties and population connected to the public water supply system. It extends to 17 lines, set out in three blocks:

- Block A Properties (Lines 1 & 2). Reports properties connected during the year.
- Block B Billing (Lines 3-12). Includes a breakdown of all measured and unmeasured household and non-household properties billed by the company. The property numbers should be the average for the reporting year.
- Block C Population (Lines 13-17). This records the population within each of the measured and unmeasured household and non-household categories. The population numbers should be the average for the reporting year.

In keeping with the Utility Regulator guidance, lines 6, 10 and 17 are calculated lines, being the sum of their equivalent lines within the table. Blocks are completed by the CSD Services - CS MI & Data (Blocks A & B) and Leakage DMU (Block C) teams.

The information in this table is used in a number of core corporate calculations such as the water balance calculation and in tariff, charging analysis and determination (water delivered unit cost).

Definition of 'Billed' Properties

Domestic customers were originally due to be charged for water and sewerage charges from April 2007. However, this was deferred in April 2007 and has not been implemented since. There are no apparent plans for charges to be implemented during 2016/17. NI Water is subsidised for these domestic customers by Department for Regional Development (DRD) (note: DRD is the now Department for Infrastructure DFI).

In April 2008, NI Water extended the charging in the non-domestic sector to include unmeasured non-households in addition to the measured non-household customer base. These charges are based on the NAV of the non-household property, derived from annual information provided by Land and Property Services (LPS).

As per previous AIR submissions, for clarity, where reference is made in Table 7 to 'billed' household and 'billed' non-household, this is taken as the provision of water services to customers whether they are billed directly (non-domestic customers) or payment is made through subsidy by DFI (domestic customers).

Classification of Farms

As per Utility Regulator guidelines, farms were reclassified as billed non-households for AIR09 – this has remained for AIR17. This classification remains for AIR 17 and farms are included in the billed non-households. Previously, in AIR08, farms had been classified and reported as 'billed' households on the principle of their status and allocation of 'domestic allowance'.

Data Sources, Data Validation and Data Quality Projects

The primary source of information for the new connections and property data in Table 7 is the customer-billing database, RapidXtra.

Customer/Property information is updated through:

- 'business as usual' customer contacts, such as new connection requests, move in/move outs, or

- through Data Quality initiatives/Projects, and/or
- Metering work streams e.g. UNHH, Optants, and Proactive Meter Exchange etc.

Under the Water & Sewerage Services (2006) Order, NI Water were required to install meters on all new household connections from April 2007. This practice has stopped as directed by a change is legislation which took effect in July 2016. The legislation was amended by Regulations, which in effect relieved NIW of the obligation to install meters at newly connected domestic properties. As domestic customers are not charged on a measured basis, the property is reported as unmeasured. Some domestic properties were initially reported as measured in AIR10 but this was rectified as per the erratum to AIR10. Depending on the basis for charging when domestic billing is introduced, these customers can be activated as measured household if required.

Data on property counts and classifications continue to be reported monthly from Rapid in the Rapid Property Summary (RPS). The RPS provides us with a snapshot at the end of each month in terms of gross movements; it does not support us in the explanation of net movements within the data.

Data on population continues to be obtained from Northern Ireland Statistics and Research Agency (NISRA), adjusted for the winter months based on information published by the Department for Economy (DFE) and the Central Statistics Office (CSO), Ireland.

From the Rapid Property Summary there are deemed to be 599 (gross) 'unmeasured – not charged' properties which (based on sample taken) are mostly NI Water properties. NI Water are currently investigating any 'unmeasured – not charged' properties outside of NI Water ownership to ensure they are classified correctly.

Background

As Table 7 is based on averages, please find summary table below for 'End March 2016' and 'End March 17'. The '1st Dec 2016' are actual numbers used in the Principal Statement and Tariff Setting process.

Property Numbers	March 2016	1st Dec 2016	March 2017	Expected Movement
Unmeasured Water Household	710120	720324	723910	Increase
Unmeasured Water Non-Household	8561	8573	8642	Decrease
Measured Water Non-Household	70013	70409	70286	Increase
Voids	51015	49606	49560	

The variances in our property numbers from AIR16 to AIR17 can be explained by the following:

1. New Connections during the reporting year. The figures are based on the data supplied by our New Connections team of the actual connections made in 2016/2017. Previously we generated these figures from Rapid however AIR 16 identified issues with this method due to incorrect classification of things like lead pipe replacements as new connections. From this NIW set up a project to investigate and review data and procedures. Until the completion of this, we are using the figures from the new connections team as the most accurate source. Once it is complete, it will allow us to extract this data from a system run report again.

2. As a result of a customer contact, e.g. septic tank empty request, no water complaint, blocked sewer, updating of standing data e.g. removal of services etc. Within this category there are 2 scenarios:
    - The adding of properties NI Water didn't know about and
    - The adding of duplicates as the customers address could not be found on Rapid.

    (For example, Rapid may hold the site number but when the customer contacts NI Water, they quote the verified postal address, which is different, therefore creating a duplicate. The street name may also have changed from the time of New Connection to that of customer contact – street names can change in the early stages of site development).
3. Removal of properties as a result of data quality initiatives.
    a. Duplicate properties
    b. Reclassifications of properties that were recorded in error
    c. Reclassifications of new connections. The decrease is as a result of reclassifications on New Connections in 16/17 as highlighted in last year's commentary as well as the change in the processes within the Customer Connections Team.
4. Change in occupancy status – movement from void/vacant to occupied and vice-versa.

The work on data validation is ongoing, with new validations 'live' as a result of the Customer Billing and Contacts (CBC) Project Phase 1 & 2 implementation. Further validations will be implemented in Phase 3 & 3a during 2016/17 & 2017/18. These validations include Point of Entry controls; System based classification alignment, Intra and Inter table/field alignment, etc. In addition, other data quality requirements have been built into the new CBC Contract. They cover all aspects of the property life cycle (creating, amending and demolishing properties) and data degradation will be monitored/measured throughout.

The difference between the gross increase in properties and the number of new connections can be attributed to

- movement from the no water/well water category to unmeasured supplied, and
- movement in occupancy status (from void to occupied)

No Water/Well Water

No Water / Well Water and demolished properties are not included in the Table 7 property count; however, their exclusion does impact on the number of reported 'supplied' properties.

We highlighted a significant increase in the number of no water/well water properties – from 7900 to 15000 over the course of the 2014/15 year. Our analysis has identified two processes, which had caused this increase – new connections and septic tank (albeit the numbers in the latter are small).

The follow-up investigation into the increase in 'no water/well water' as a result of new connection has confirmed that there was an error in the coding process at the start of the year. Properties originally set up as 'Unmeasured – No Water/Well Water' – which is the correct code once the property is initially created but not yet connected to the public water supply system – should have been updated to 'Unmeasured – Supplied' once the connection was made. Since this error was identified, we have been working through the

affected data records to update the classification, checking that it has not already been updated through other BAU processes.

Not all properties are connected to the public water supply system, but some of these have a septic tank and will look to NI Water to avail of the free annual septic tank desludging service.

As of the end of March 2017, the number of 'no water/well water' has reduced by 2,376.

Household Properties	Mar-14	Mar-15	Mar-16	Mar-17
No Water / Well Water	7980	15088	12338	9962


Report
Recommendation - /

Test Meters

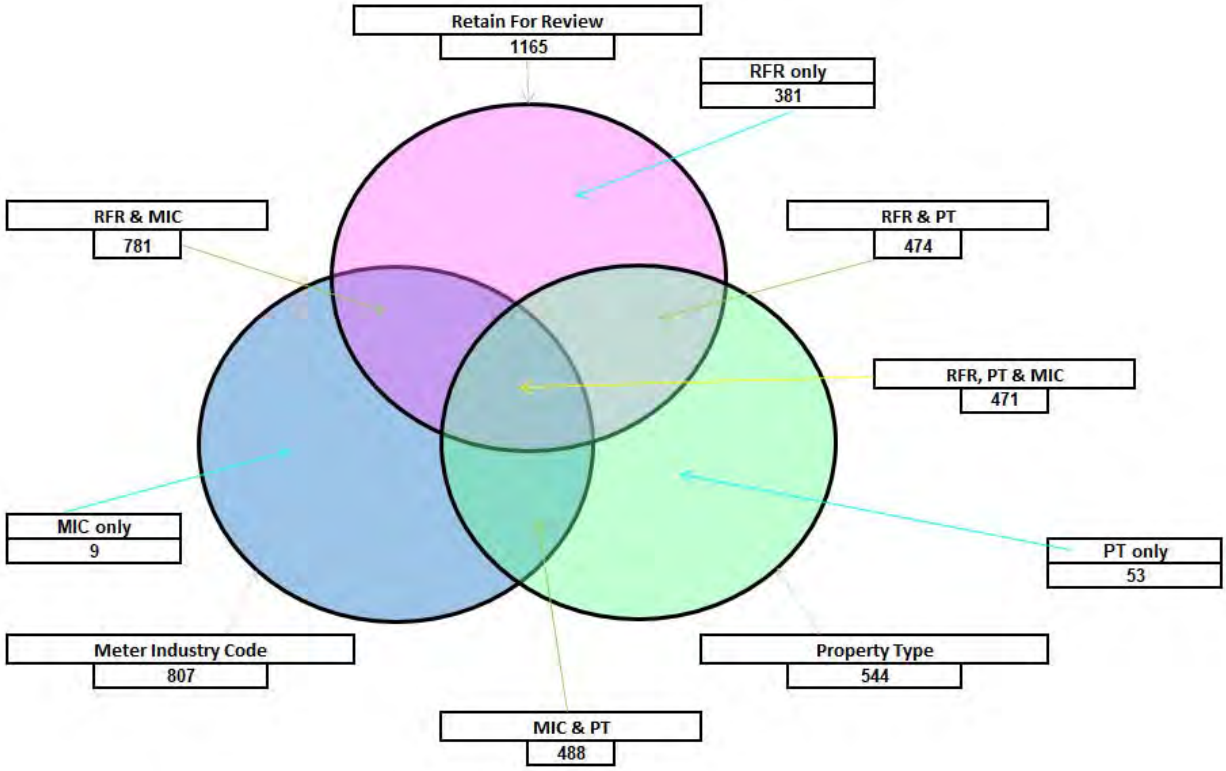
As a result of AIR 16, an investigation into 'test' and 'retain for review' meters was completed.

The Metering & Billing project currently have 1226 accounts to be reviewed in relation to the 'test' and 'retain for review' status. This number includes the 591 test meters, which will be progressed through the Project and Business as Usual activity.

The movement within the Test Meter category of the RPS is shown below.

	Test Meters (2016)	Test Meters (2017)	Movement
Household	904	591	313 reduction
Non-Household	364	224	140 reduction

As previously discussed with the Reporter as part of the Principal Statement process NI Water highlighted areas of potential data misalignment within historic records in terms of Property Water Status, Property Type and Meter Industry Code and as such all 3 have to be considered when extracting test meters. See diagram below:



Site Metered Properties

As part of the ongoing data checks, NIW has been confirming the number of site-metered properties, which are multiple properties being charged through a single meter, such as business parks and industrial estates.

To ensure that these properties are not double counted, they are not included in Table 7 non-domestic property counts (although NIW retain this information for customer record and charging purposes).

There are 830 domestic properties classified as site meters and there will be further investigation and analysis to be completed during 2017/2018 to ensure these are classified correctly.

There is an active project to confirm the classification of site metered properties – this is currently targeting the Belfast Harbour Estate and any lessons learned will be considered for other sites and also working closely with LPS to see how we can exploit their data to confirm customers and properties deemed connected to site meters.

Overall, the number of non-domestic site meters has increased by circa 150 during 2016/17. This has resulted from categorisation movements in year such as measured water to site meter and unmeasured water to site meter.

Unmeasured Household Property Movement

The table below provides a reconciliation of the reporting year property movements and resulting property numbers. It sets out how the properties have changed over the reporting year, due mainly to new connections, with some nett minor movement in the occupancy status. Note: these reported figures include domestic properties that are metered but as NI Water does not bill households for water, they are reported as unmeasured.

Property Numbers	March 2016	1st Dec 2016	March 2017
Unmeasured Water Gross Household (L7 year-end sub calc)	749148	758941	762389
Unmeasured Water Occupied Household (L3 year-end sub calc)	710120	720324	723910
Unmeasured Water Voids Household	39027	38617	38478

Household Voids	Voids	Difference (in-year)
March 2017	38478	(-) 549
March 2016	39027	(-) 580
March 2015	39607	

Measured Household Property Movement

Due to the deferral of domestic charging, NI Water does not bill households for unmeasured or measured water, therefore we don't report figures for measured household property movements (they are included in the unmeasured line as they are not billed)

Unmeasured Non-Household Property Movement

Property Numbers	March 2016	1st Dec 2016	March 2017
Unmeasured Water Gross Non-Household	15863	15062	15047
Unmeasured Water Occupied Non-Household (L8 year-end sub calc)	8561	8573	8642
Unmeasured Water Voids Non-Household	7302	6489	6405

Measured Non-Household Property Movement

Property Numbers	March 2016	1st Dec 2016	March 2017
Measured Water Gross Non-Household	74699	74909	74963
Measured Water Occupied Non-Household (L9 year-end sub calc)	70013	70409	70286
Measured Water Voids Non-Household	4686	4500	4677

Non-Household Voids

Non-Household Voids	Voids	Difference (in-year)
March 2017	11082	(-) 906
March 2016	11988	(-) 268
March 2015	12256	

Annex A details the Line Methodology followed for the figures calculated in Table 7 Lines 1-12.

Confidence Grades

We have kept the confidence grades consistent with those of AIR16. During the reviews mentioned in the company commentary above, we will retain evidence to support any change in confidence grades. NIW continues to investigate the mis-coding of no water/well water where they were raised as new connections but in fact do not receive a supply. This has had no impact on the reliability and/or accuracy of the confidence grade.

Whilst the quality of data will improve, the method of extraction and reporting will remain consistent. The automated tool (developed during AIR12) to populate the base property tables has remained in place for AIR17.

Lines 13 – 17 Population

The population data used by NI Water has been derived from 2014 based Population Projections obtained from NISRA (Northern Ireland Statistics & Research Agency) website at
https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/NPP14-coc.xls

NISRA Population Projections figures are based on births, deaths and migration information gathered by NISRA between 1st July and 30th June for each year. Net migration is the overall difference between the in-migration and out-migration for Northern Ireland and is calculated using health card registration and deregistration data for Northern Ireland. NISRA update their population projections every two years; however, the 2016 based Population Projections for Northern Ireland will not be published until October/November 2017.

The population for unconnected properties has been calculated from two sources:

1. The gross number of unconnected household properties is provided by Customer Services. In AIR14, this figure was reported as the average of the year start and end values of “no water/well water”. In 2014/15, however the figure for “no water/well water” increased from 7,981 to 15,088. NI Water understood that new connections and some other in-year property movements were miscoded as ‘not supplied’.
   As a result, NI Water have investigated this issue in 2015/16 and 2016/17, however consider it appropriate for the AIR17 calculation of the total water connected population (Lines 13 - 17) to use the reported 2014/15 figure of 7,981 while the process of updating property miscoding continues.
2. The unconnected occupancy is sourced from the NIHE Housing Condition Survey 2011 (statistical annex – Table 5.6)
   http://www.nihe.gov.uk/2011_house_condition_survey_annex_tables__published_october_2012_.pdf

The number of unconnected properties is 7,981 and an occupancy rate is calculated at 0.474 (rounded) to determine a total population for unconnected properties of 3,783. The total supplied population for all connected properties is calculated as 1861.58 (x1000). (Line 17)

Non-household population has been calculated by adding the population in communal residence
http://www.ninis2.nisra.gov.uk/InteractiveMaps/DataVis/Households2012.pdf
to the population of farms. The number of farms has been determined from the company’s Rapid system and the occupancy rate is obtained from NISRA https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/HHP12_Table4.xls

It should be noted that there was a significant change in the communal population from AIR15 to AIR17 and the average household occupancy rate from 2.45 to 2.53. This is the

first publication from NISRA since the 2011 census regarding these figures. The communal population for AIR17 is 24,498 compared to 32,612 as used in AIR15. The AIR16 communal population was 24,110

The farm population is 30,835 x 2.53 = 78,013. Therefore, with the addition of the communal population, the non-household population is 102.51 (x1000).

The connected household population is the difference between the non-household population and the overall connected population. This gives the household population a figure of 1759.07 (x1000) (Line 13). The confidence grade for this line is a B2. This line remains the dominant figure within Section C of Table 7.

The population for non-household measured/unmeasured was derived from the percentage split between measured (not including farms) and unmeasured non-household properties and applied against the NHH communal population. The total farm population (78,013) has been classed as measured. The communal population (24,498) is split based on 8,602 unmeasured customers (17.95%) and 39,315 measured customers which excludes farms (82.05%). This therefore provides a population for measured NHH of 98.11 (x1000) (Line 16) and an unmeasured NHH population of 4.40 (x1000) (Line 15).

Line 17 is calculated by summing Line 13 + Line 14 + Line 15 + Line 16. This gives a figure if 1861.58 (x1000) which is the total connected population.

It is recognised that the primary means of determining population numbers is from data published by NISRA. Bearing this in mind, NI Water, as in previous years, has endeavoured to populate a confidence grade against the various lines. The Reporter has previously stated that in doing so the company has made a reasonable effort to assign appropriate confidence grades and accepts that NI Water has no influence over the methodology adopted by NISRA.

Annex A – Line Methodology for Table 7

Line 1 - Household Properties Connected during the Year

This line represents the number of new household (domestic) properties added within the area of supply during the reporting year (previously not connected for water supply).

An issue with the system report has resulted in a change in methodology for this year. The figures are based on the actual completed connections within 2016/17 as per embedded document. It is NIW policy to install meters on all Non-Household New Connections.

AIR17_NCs_1617_6646.xlsx

Therefore, the number of new household connections for the year is 6327.

Household properties connected during the year	6327

Line 2 - Non-Household Properties Connected during the Year

This line represents the number of new non-household (non-domestic) properties added within the area of supply during the reporting year (previously not connected for water supply).

An issue with the system report has resulted in a change in methodology for this year. The figures is based on the actual completed connections within 2016/17 as per embedded document. It is NIW policy to install meters on all Non-Household New Connections.

Therefore, the number of new non-household connections for the year is 319.

Non-Household properties connected during the year	319

Line 3 - Households Billed Unmeasured water

Due to the deferral of domestic charging, NI Water does not bill households for unmeasured or measured water.

Void properties have been excluded, so occupied numbers only used.

This is calculated from the monthly Rapid Property Summary for AIR17 (dated 31st March 2017) as attached below.

Rapid Property Summary - March 20

Households Billed Unmeasured Water	End March 2016	End March 2017
Household - Unmeasured	670274	680612
Household - Measured – Not Charged (test meters)	361	213
Household - Measured	38864	42370
Household - Site Meters	601	698
Unmeasured - Not Charged	20	17
Total	710120	723910
Average (Apr16/Apr17)	**717015**	

The figure represents the number of unmeasured domestic properties that would have been billed had charging been introduced.

Line 4 - Households Billed Measured Water (external meter)

Due to the deferral of domestic charging, NI Water does not bill households for measured water. Therefore, any domestic properties that would have been included in line 4 are now included in line 3, as per AIR10 erratum, Reporters Recommendations and Undertaking A Agreement.

Households Billed Measured Water (external meter)	End March 2016	End March 2017
	0	0
Average Apr 16/Apr17	**0**	

Line 5 - Households Billed Measured Water (not external meter)

Due to the deferral of domestic charging, NI Water does not bill households for measured water.

Average number of billed metered households (not externally metered).

An internal meter is one located inside the customer's property or attached to the property at above ground level in a box or cabinet. All other meters should be classed as external with void properties excluded.

Households Billed Measured Water (internal meter)	End March 2016	End March 2017
	0	0
Average (Apr16/Apr17)	**0**	

Line 6 - Households Billed Water

Average number of households billed for water within the water supply area.

Calculated by adding AIR17 Table 7 lines 3, 4 and 5

Households Billed Water	Average 16/17
Households billed unmeasured water (Line 3)	717015
Households billed measured water (external meter) (Line 4)	0
Households billed measured water (not external meter) (Line 5)	0
Total	**717015**

The figure represents the number of domestic properties that would have been billed had charging been introduced.

Line 7 - Household Properties (water supply area)

This is the number of connected household properties within the water supply area, including void properties.

This is calculated from the monthly Rapid Property Summary for AIR17 (dated 31st March 2017)

Household Properties (Water Supply Area)	End March 2016	End March 2017
Unmeasured	705231	714297
Measured – Not Charged (Test)	364	224
Measured	42824	47019
Site Meters	708	830
Unmeasured - Not Charged	21	19
Total	749148	762389
Average (Apr16/Apr17)	**755769**	

Line 8 - Non-Household Billed Unmeasured Water

This is the average number of non-households billed for unmeasured water within the supply area, calculated from the Rapid Property Summary.

Figures are based on the average of End March 2016 and End March 2017 non-domestic unmeasured properties.

Non-Households Billed Unmeasured Water	End March 2016	End March 2017
	8561	8642
Average (Apr16/Apr17)	**8602**	

Line 9 - Non-Household Billed Measured Water

This figure represents the average number of non-households billed for measured water within the supply area, calculated from the Rapid Property Summary.

Figures are based on the average of End March 2016 and End March 2017 non-domestic measured properties.

Non-Households Billed Measured Water	End March 2016	End March 2017
	70013	70286
Average (Apr16/Apr17)	**70150**	

Site metered properties are a subset of the overall non-domestic billed measured water customer base, therefore not included in the figure above to avoid duplication. Where many customers are served through one site meter, only the landlord or business park management are considered as the customer, the other business are tenants.

Line 10 - Non-Household Billed Water

This figure represents the average number of non-households billed for water within the supply area.

This is calculated from the Rapid Property Summary for AIR17, excluding voids.

The sum of AIR17 Table 7 lines 8 & 9.

Non-Households Billed Water	Average 16/17
Non-Households Billed Unmeasured Water (Line 8)	8602
Non-Households Billed Measured Water (Line 9)	70150
Total	**78751**

Line 11 - Non-Household Properties (water supply area)

This is the average number of connected non-household properties within the water supply area, including void properties, calculated from the Rapid Property Summary.

Non-Household Properties (Water Supply Area)	End March 2016	End March 2017
Unmeasured	15863	15047
Measured	74699	74963
Total	90562	90010
Average (Apr16/Apr17)	**90286**	

Line 12 - Void Properties

This is the average number of properties, within the supply area, which are connected to the distribution system but do not receive a charge, as there are no occupants – (voids).

This is calculated from the Rapid Property Summary.

Void Properties (Water Supply Area)	End March 2016	End March 2017
Non-Household - Unmeasured	7302	6405
Non-Household - Measured	4686	4677
Household - Unmeasured	34957	33685
Household - Measured	3960	4649
Household – Measured - Not Charged (Test)	3	11
Household – Site Meters	107	132
Household - Not Charged	1	1
Total	51016	49560
Average	**50288**	

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 8 NON FINANCIAL MEASURES
WATER METERING (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	HOUSEHOLD METER INSTALLATION																				
1	Selective meters - installed	nr	0	3,078	B3	3,030	B3	3,787	B3	5,218	B3	1,395	B3								
2	Meter optants installed	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1								
3	Meters installed - external meter with existing or new boundary box	nr	0	3,078	B3	3,031	B3	3,787	B3	5,218	B3	1,395	B3								
4	Meters installed - external meter without boundary box	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1								
5	Meters installed - internal meter	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1								
6	No. of meter installation requests outstanding for greater than three months	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1								
B	NON HOUSEHOLD METER INSTALLATION																				
7	Selective meters - installed	nr	0	692	B2	458	B2	509	B2	473	B2	449	B2								
7a	Number of non household meters renewed	nr	0	4,653	B2	6,772	B2	6,044	B2	9,830	B2	9,671	B2								
8	Meter optants installed	nr	0	45	B2	23	B2	18	B2	20	B2	57	B2								
9	Meters installed - external meter with existing or new boundary box	nr	0	638	B2	396	B2	472	B2	469	B2	452	B2								
10	Meters installed - external meter without boundary box	nr	0	17	B2	22	B2	37	B2	22	B3	38	B3								
11	Meters installed - internal meter	nr	0	82	B2	62	B2	18	B2	2	B2	16	B2								
12	No. of meter installation requests outstanding for greater than three months	nr	0	10	B2	8	B2	1	B2	2	B2	6	B2								
C	WATER DEMAND AT RECENTLY METERED NON-HOUSEDHOLD PROPERTIES																				
13	Average water billed - selective metered properties	l/prop/d	2	363.53	B3	520.74	B3	449 68	B3	384 09	B3	532.55	B3								

Table 8 – Non Financial Measures – Water Metering

Lines 1-6 - Household meter installation

NIW installed meters on newly connected domestic properties up to Friday the 8th of July as per the obligation associated with Article 81 of The Water and Sewerage Services (Northern Ireland) Order 2006. NIW was advised by the Department on the 6th July that the Minister had commenced the process of drafting regulations to remove the obligation placed upon NIW to fit meters at all newly connected domestic premises. As a result of this announcement, NIW ceased metering new domestic premises after the 8th July. The regulations were completed and commenced on the 5th December removing the obligation associated with Art 81 to meter newly connected domestic premises.

The company never installed meters at existing domestic premises or at the request of domestic customers (including those over 60 years of age) given the deferral of charging by the Northern Ireland Assembly (NIA) in March 2007. The company did not exercise its power to meter domestic properties upon change in occupancy or ownership for the same reasons as stated above. For these reasons, the company has entered zero in lines 2, 4, 5 and 6 of section A table 8. Information is however provided in lines 1 and 3.

Line - 1 Selective meter's installed

Until the 8th July, NIW sought to selectively meter all newly connected domestic properties in accordance with Article 81 of the 2006 Order. A total of 1395 water meters were installed at new domestic properties between the 1st April and 8th July until instructed by the Department to cease meter installations prior to the making of new regulations.

NIW until the 8th July issued new connection meter installations jobs in batches and these were usually forwarded to the meter installation contractor on a weekly basis

In total NIW fitted 1395 meters at newly connected domestic premises in the reporting year.

Line 3 - Meters Installed – external meter with existing boundary box

All newly connected domestic properties are provided with a boundary box at or as close to the boundary as possible when connected to the water main. As such all new domestic properties have a water meter fitted within the boundary box several weeks after the connection is completed. A total of 1395 water meters were installed in existing boundary boxes at new domestic properties during the reporting period.

NIW issued new connection meter installations jobs in batches until the 8th July and these were forwarded to the meter installation contractor on a weekly basis

Lines 7-12 - Non household meter installation

NIW installs water meters at newly connected non-domestic premises as per the obligation associated with Article 81 of The Water and Sewerage Services (Northern Ireland) Order 2006.

The company in an attempt to increase its meter penetration is continuing to install meters across its non-domestic revenue generating customer base, providing it is technically possible to do so.

Line 7 - Selective meters installed

Meters installed at the behest of NI Water include those properties selected because they are new non-domestic connections or fall into the selective category. The total selective meter installs for the year was 449. New connections accounted for 38 large and 265 small diameter installations, the other 146 installations are classed as selectives performed by the metering contractor and NIW staff.

Line 7a - Number of non-household meters renewed

NIW has a reactive meter maintenance section within the MCT and reactively replaces meters and street furniture associated with meters. The maintenance activities are driven by reports generated by the meter readers, meter query technicians and project teams. All Meter Maintenance Requests (MMR's) are logged on a local database and channelled through a maintenance process. The MMR's are forwarded to the maintenance contractor who has a maximum of 28 days to complete the replacement or remedial work and return the associated data. The returned data is processed by the MCT and meter exchanges are notified to the individual who requested the job, the CSC (for billing purposes) and the Corporate Asset Register (for asset management reasons). The meter maintenance process is an end-to-end process managed by the metering section using an in house database. During the reporting year NIW meter maintenance section replaced 1741 meters through the MMR process.

NIW also has a Proactive Meter Exchange (PME) programme which is designed to target approximately 6000-7000 small diameter meters exchanges each year. The meters selected for exchange are those deemed to be 17 years of age or more and where possible those meters with a whole life consumption reading >8000m3. During the reporting year, NIW exchanged 7399 meters under the PME programme.

An additional 531 meters were replaced through an Engineering and Procurement contract for water mains rehabilitation.

The total number of meters replaced by NIW in the reporting year combining all of the above work streams was 9671 meters.

Line 8 - Meter optants installed

NIW will install meters at existing non-domestic premises when a customer requests a meter and providing it is technically possible to do so. An optants process is in operation and has been communicated across the company to include the Customer Services Centre (CSC). If an unmeasured customer contacts the company and requests the option to have their premises billed as a measured (metered) property and it is determined following a survey to be possible, a meter will be installed. It is the company preference to install meters externally in boundary boxes or in chambers however if this is not technically possible an internal meter will be considered. The total number of non-domestic meter optants for the reporting year was 57.

Line 9 - Meters installed – external meter with existing boundary box

NI Water continues to actively install external meters across a number of metering work streams that includes optants and other selective non-domestic customer properties. While the majority of these are fitted in existing boundary boxes, which essentially entails screwing in a meter, other installations, can only be completed with the replacement of the boundary box. This involves replacing legacy stop tap boxes often referred to as 'Toby' boxes and replacing them with modern proprietary boundary box units. The total number of non-domestic meters installed within this category was 452.

Line 10 - Meters installed – external meter without boundary box

NI Water Developer Services Team (DS) is responsible for coordinating new non-domestic water connections and meter installations >32mm diameter. These large connections by the nature of their size require a chamber constructed to facilitate the meter and valves installations, these totalled 38 in the reporting year.

Line 11- Meters installed – internal meters

NI Water's preference is to install meters externally when possible. Internal installations are only considered and undertaken when the possibility of an external installation has been discounted because of engineering difficulties, shared supplies or an inability to capture the total volume of water entering a property. Internal meters have been installed across the selective and optant metering programmes. The total number of internal non-domestic meter installations completed this reporting year was 16.

Line 12 - No. of meter installation requests outstanding for greater than three months

The number of non-household optant meter installation requests that took longer than 3 months to complete was 6.

Line 13 – Average Water Billed - Selective Metered Properties

The meters uploaded to Rapid during the previous reporting year (2015/16) are the focus for this line, along with the consumption usage throughout the 2016/17 reporting year.

The Trim mean function was applied to the consumption to ensure the result was a true average. There were some very high and very low consumption, which would have skewed the results.

The figure reported for Line 13 is **532.55 l/prop/day,** an increase of 148.46 l/prop/day from AIR16. To demonstrate the range of consumption for AIR16 and AIR17, please see table below:

Consumption Band (m^3)	AIR16	AIR17
1-1000	1173	623
> 1000	122	68
Total (excl. zeros)	1295	721

The embedded document below details the meter industry codes of the meters included in this calculation. This will help to explain/justify the decrease in the l/prop/day volume.

AIR16_17
Comparison per MIC

NORTHERN IRELAND WATER LIMITED COMPANY - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 9 NON FINANCIAL MEASURES
WATER QUALITY (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	WATER TREATMENT AND DISTRIBUTION																				
	Lines 1 to 5 not used																				
B	DISTRIBUTION INPUT COVERED BY WORK PROGRAMMES AGREED WITH DWI																				
6	Raw water deterioration	Ml/d	3	23.100	A2	3 654	A2	3.559	A2	15.364	A2	15.322	A2								
7	Conditioning water supplies to reduce plumbosolvency	Ml/d	3	563 648	A2	562 851	A2	560.429	A2	562.876	A2	571.703	A2								
8	Reducing the risk from Cryptosporidium	Ml/d	3	0 000	A1	0 000	A1	0.000	A1	0.000	A1	0.000	A1								
9	Other	Ml/d	3	22 952	A2	0.000	A1	106.441	A2	0.000	A1	0.000	A1								

Table 9 – Water Quality

Background – Year on Year

The perceived quality of water supplied by NI Water to customers has plateaued between 2014 and 2016:

- NI Water now assesses compliance using % Overall Compliance across customer tap, WTWs, SRs and Authorised Supply Points rather than Mean Zonal Compliance. Under this means of assessment, NI Water's compliance has risen slightly from 99.83% in 2015 to 99.86% in 2016 (figure assessed by NI Water - waiting for confirmation from DWI).
- The Drinking Water OPA (based on turbidity, iron, manganese, faecal coliforms, Total Trihalomethanes (THM) and aluminium at customer tap) decreased from 99.50% in 2015 to 99.13% in 2016 due largely to a number of THM exceedances.
- The percentage compliance measured at Water Treatment Works (WTWs) increased slightly from 99.89% in 2015 to 99.95% in 2016.
- The percentage compliance measured at Service Reservoir (SR) increased from 99.93% in 2015 to 99.95% in 2016.

Please note a total re-zoning exercise was carried out for 2009 based on more accurate DMA data. The new 2009 and 2010 Water Supply Zones were not contiguous with the previous zones, and as such were given new codes and names, with the codes reflecting the leakage supply areas, and the names reflecting the supplying WTW / SR and the major conurbation in the zonal area. Following some small WTWs being taken out of service in 2010, some further zones were created for 2011 with new codes and names as before. For 2014 onwards, some zonal boundaries were moved to more closely match leakage operational boundaries.

The previous method of compliance assessment (Mean Zonal Compliance) gave undue emphasis on individual exceedances in small zones. The % Overall Compliance methodology treats all exceedances with the same emphasis.

Line 6 – Raw water deterioration

The data used for the estimation of average flow at WTWs in Table 9 lines 6-9 was supplied from operations leakage metering. For this return, the Distribution Input was calculated as the average daily flow from the various individual sites or amalgamation of associated readings obtained from leakage metering. In accordance with the guidance, sites which were out of service at the end of the reporting period (the calendar year), will have been excluded and would be listed here. During the reporting period, Camlough WTW was removed from service.

During 2010 - 2015 exceedances of MCPA were detected at Killyhevlin, Derg, Ballinrees, Belleek, Clay Lake, Seagahan, Dorisland and Carran Hill WTWs. A programme of enhanced monitoring for MCPA has been setup for these sites.

Site Name	Ml/d Raw Water Deterioration	Comment
Ballinrees	29.860	Enhanced sampling programme
Belleek	1.684	Enhanced sampling programme
Carran Hill	4.875	Enhanced sampling programme
Dorisland	26.982	Enhanced sampling programme
Killyhevlin	23.723	Enhanced sampling programme
Seagahan	9.545	Enhanced sampling programme
Total:	96.667	

DWI is content with the enhanced programme above and the sites have not been included in the calculations.

Authorised Departures are no longer likely to be used as regulatory instruments against NIW by DWI. Enforcement Orders (including "Consideration of Provisional Enforcement Orders", "Provisional Enforcement Orders" and "Regulation Notices") are now the methodology by which NIW is regulated by DWI.

A CPEO for Derg WTW was closed in 2016, being replaced by a PEO due to contravention of the Regulatory Standard for the pesticide MCPA.

Including this 1 site, the volume for Raw Water deterioration is therefore 15.322 Ml/d.

Line 7 – Conditioning water supplies to reduce Plumbosolvency

NI Water, as required by DWI following discussion with the Health Authorities, has put in place orthophosphoric acid dosing to control plumbosolvency in the distribution system. The average initial dose rate was approximately 1 mg/l following propensity testing. The level of dosing is reviewed annually against compliance with existing and future lead standards, with DWI being informed as to the proposed dosing rates. DWI has the opportunity to query the proposed dose rates. Following the annual review, some of the dose rates for 2016 were reduced with most however remaining at the same levels.

Site Name	Average Dosed Water (ML/d)
Altnahinch	8.945
Ballinrees	29.860
Belleek	1.684
Carmoney	17.855
Carran Hill	4.875
Castor Bay	98.555
Caugh Hill	16.554
Clay Lake	3.308
Derg	15.322
Dorisland	26.982
Drumaroad	104.059
Dungonnell	8.904
Dunore Point	83.201
Fofanny	36.190
Forked Bridge	20.871
Glenhordial	3.898
Killyhevlin	23.723
Killylane	11.766
Lough Bradan	8.423
Lough Fea	11.457
Lough Macrory	10.525
Moyola	15.203
Seagahan	9.545
Total:	571.703

Line 8 – Reducing the risk from Cryptosporidium

DWI approved Cryptosporidium risk assessments were previously carried out on all sources annually and showed effective barriers existed at all NI Water's treatment works. These risk assessments are now incorporated into annual revisions of the treatment works and supply systems Drinking Water Safety Plans (DWSP) which are submitted to DWI under regulation 26.

Under the current guidance, which requires that this should be assessed against sites with "legally binding instruments", NI Water has no sites which fall into this category. The return for this line is therefore 0 Ml/d.

Line 9 – Other

There were no other legal instruments in place during 2016; therefore, the return for this line is 0 Ml/d (see appendix).

Confidence Grades

Confidence grades used in returns are based on OFWAT guidance documentation.

Appendix – Lines 6 & 9

Regulatory enforcement	Issue Date	Location	Parameter	Date Closed
CPEO/15/01	Issued 14/04/2015	Derg WTW	Contravention of the Regulatory Standard for the pesticide MCPA	26/01/2016

Regulatory enforcement	Issue Date	Location	Parameter	Date Closed
PEO/16/01	Issued 30/06/2016	Derg WTW	Contravention of the Regulatory Standard for the pesticide MCPA	

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 10 NON FINANCIAL MEASURES
WATER DELIVERED (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**WATER DELIVERED - VOLUMES**																				
1	Billed measured household	Ml/d	2	0 00		0.00		0 00		0.00		0 00									
2	Billed measured non-household	Ml/d	2	121.44		125.79		120.17		118.03		120 58									
3	Billed measured	Ml/d	2	121.44		125.79		120.17		118.03		120 58									
4	Billed unmeasured household	Ml/d	2	297.41		285.52		292 36		294.86		302.76									
5	Billed unmeasured non-household	Ml/d	2	6 87		6.07		5 82		5.28		5.17									
6	Billed unmeasured	Ml/d	2	304 28		291.59		298.18		300.14		307 93									
B	**WATER DELIVERED - COMPONENTS**																				
7	Estimated water delivered per unmeasured non-household	l/prop/d	2	630 51	C4	591.01	B4	606 98	B4	595.87	B4	601 02	B4								
7a	Estimated water delivered per unmeasured household	l/prop/d	2	436 66	B3	414.50	B3	420.70	B3	418.97	B3	422 25	B3								
8	Per capita consumption (unmeas'd h'hold - excl s/pipe leakage)	l/h/d	2	149 98	B3	145.53	B3	148.42	B3	148.42	B3	151 89	B3								
9	Per capita consumption (meas'd h'hold - excl s/pipe leakage)	l/h/d	2	0 00		0.00		0 00		0.00		0 00									
10	Underground supply pipe leakage (unmeas'd households)	l/prop/d	2	60 20		51.22		50 87		50.38		49 62									
11	Underground supply pipe leakage (ext. metered households)	l/prop/d	2	30.10		25.61		25.44		25.19		24 81									
12	Underground supply pipe leakage (other metered h'holds)	l/prop/d	2	60 20		51.22		50 87		50.38		49 62									
13	Underground supply pipe leakage (void properties)	l/prop/d	2	60 20		51.22		50 87		50.38		49 62									
14	Meter under-registration (measured households)	Ml/d	2	0 00		0.00		0 00		0.00		0 00									
15	Meter under-registration (measured non-households)	Ml/d	2	9 29		9.70		9 21		8.52		8 22									
16	Distribution system operational use	Ml/d	2	2 36		2.39		2 51		3.05		2 93									
17	Water taken legally unbilled	Ml/d	2	14.79		15.16		17.10		16.80		16.40									
18	Water taken illegally unbilled	Ml/d	2	0 51		0.48		0.43		0.38		0 68									
19	Water taken unbilled	Ml/d	2	15 30		15.64		17 53		17.18		17 08									
20	Water delivered (potable)	Ml/d	2	441 02		433.02		435 88		435.35		445 59									
21	Water delivered (non-potable)	Ml/d	2	0 00		0.00		0 00		0.00		0 00									
22	Water delivered (non-standard rates: potable)	Ml/d	2	0 00		0.00		0 00		0.00		0 00									
23	Water delivered (non-standard rates: non-potable)	Ml/d	2	0 00		0.00		0 00		0.00		0 00									
24	Distribution losses	Ml/d	2	115.44		127.31		126 08		122.08		123 52									
25	Total leakage	Ml/d	2	161.75	B4	167.21	B3	165 99	B3	161.99	B3	163.43	B3								
26	Distribution input	Ml/d	2	558 82	B2	562.72	B2	564.47	B2	560.48	B2	572 04	B2								
27	Bulk supply imports	Ml/d	2	0 00		0.00		0 00		0.00		0 00									
28	Bulk supply exports	Ml/d	2	0 85		1.09		0 80		0.73		0 34									
29	Water treated at own works to own customers	Ml/d	2	557 97		561.63		563 67		559.75		571.70									
30	Overall water balance	CG			B2		A1		A1		A2		B2								
C	**SECURITY OF SUPPLY**																				
31	Security of supply index - company's planned levels of service	nr	0	100		100		100		100		100									
32	Not used																				

Table 10 – Non Financial Measures - Water Delivered

Introduction

NI Water continues to follow the methodology as described in Chapter 10 of the Northern Ireland Authority for Utility Regulation (NIAUR) AIR17 Reporting Requirements and Definitions manual March 2017. In doing so it has adhered to the methodologies for estimating the water balance set out in the Demand Forecasting Methodology report produced by NERA on behalf of UKWIR.

As a result of the Sustainable Economic Level of Leakage (SELL) study in PC13 as the method of deriving company leakage targets, NI Water has challenged themselves with the setting of a 12 Ml/d target reduction over the six year period of PC15, namely, 165 Ml/d to 153 Ml/d.

For AIR15, the final reporting year of the PC13 period, NI Water reported a reconciled leakage figure of 165.99 Ml/d which was approximately 1 Ml/d above target and subsequently established a 15/16 target of 3 Ml/d reduction in reconciled leakage to bring the PC15 programme back to profile. For AIR16, NI Water reported a reconciled leakage figure of 161.99 Ml/d.

For AIR17, the pre-MLE bottom up leakage figure of 161.33 Ml/d equated to an increase of 1.37 Ml/d from **AIR16**. This increase in leakage was a result of an increased NRR of approximately 29 Ml/d compared to AIR16 that affected the proactive leak detection effort and therefore NI Water's ability to recover and further reduce the widespread increases in minimum night flows.

In AIR15, NI Water reported a reconciled leakage figure that was approximately 1 Ml/d above the profiled target. The NRR analysis for 2014/15 was of a similar magnitude to the NRR analysis for 2016/17.

In summary, the outputs of this water balance are that the Integrated Flow Method of leakage assessment has given a figure of 172.95 Ml/d for total leakage and the Minimum Night Flow Method has provided a figure of 161.33 Ml/d. When the resulting imbalance between the two methods of 11.62 Ml/d is compared to the Distribution Input figure of 573.23 Ml/d (pre-MLE), it provides a percentage discrepancy of 2.03%. This remains within the 5% tolerance set to enable a Maximum Likelihood Estimation method to be applied, using the squares method, and produces a reconciled leakage figure of 163.43 Ml/d. This figure is approximately 2.5 Ml/d behind the PC15 profiled leakage target of 161.00 Ml/d.

Demand Analysis

During the 2016/17 reporting year there has been an increase in the distribution input of 2.1% from a pre-MLE value of 561.62 Ml/d in AIR16 to 573.23 Ml/d in AIR17.

The graph in Fig 1 below illustrates the monthly change in distribution input from AIR16 to AIR17 and highlights a marked month on month increase in demand profile in the first quarter which is supported by Fig 2, showing a period of reduced rainfall (approx. 50%), and Fig 4, showing the subsequent increase in household consumption and increased reported leakage in May/June 2016. In the second quarter however, increased rainfall, reduce sunshine hours but warmer temperatures led to a reduction in household demand and DI however minimum night flows did not reduce as expected. An in-year NRR analysis of the first and second quarters indicated a similar NRR in Q1, in comparison with AIR16 however, there was a notable 60% increase in NRR in Q2. The second half of the year

was dry however, demand was consistently higher than in AIR16. November was recorded as the 3rd sunniest since records began but, as a result of the clearer skies, brought two periods of sustained negative night time temperatures followed by a sharp swing to mild temperatures. This resulted in a further widespread outbreak of leakage from which NI Water struggled to recover. The end of the year reported a similar DI to AIR16.

Although detection resources were increased to counter the rise in reported leakage, the impact of a calculated 29 Ml/d increase in NRR, the widespread nature of higher minimum night flows and the predominant reactive nature of leak detection all resulted in a slow recovery in leakage.
As a result of NI Water's current leakage position, increased leak detection resources continue to be deployed in 2017/18.

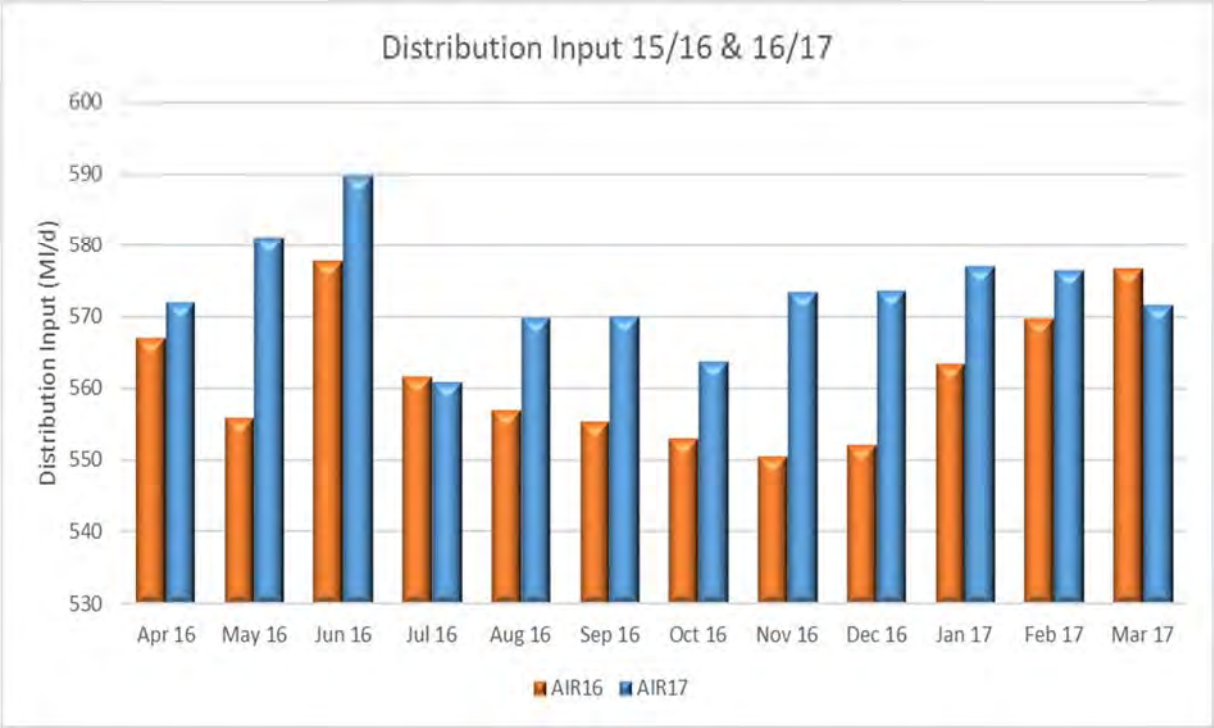


Fig 1

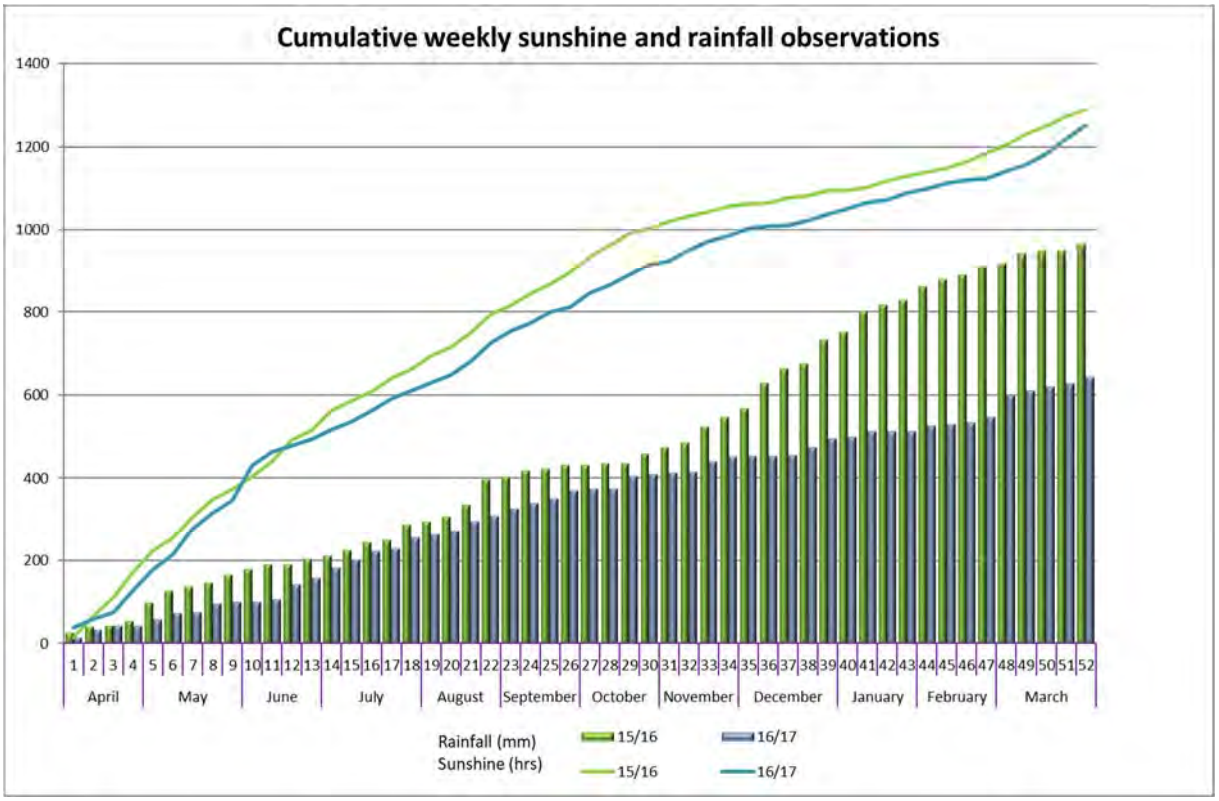

Cumulative weekly sunshine and rainfall observations
1400
1200
1000
800
600
400
200
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52
April
May
June
July
August
September
October
November
December
January
February
March
Rainfall (mm)
15/16
16/17
Sunshine (hrs)
15/16
16/17

Fig 2

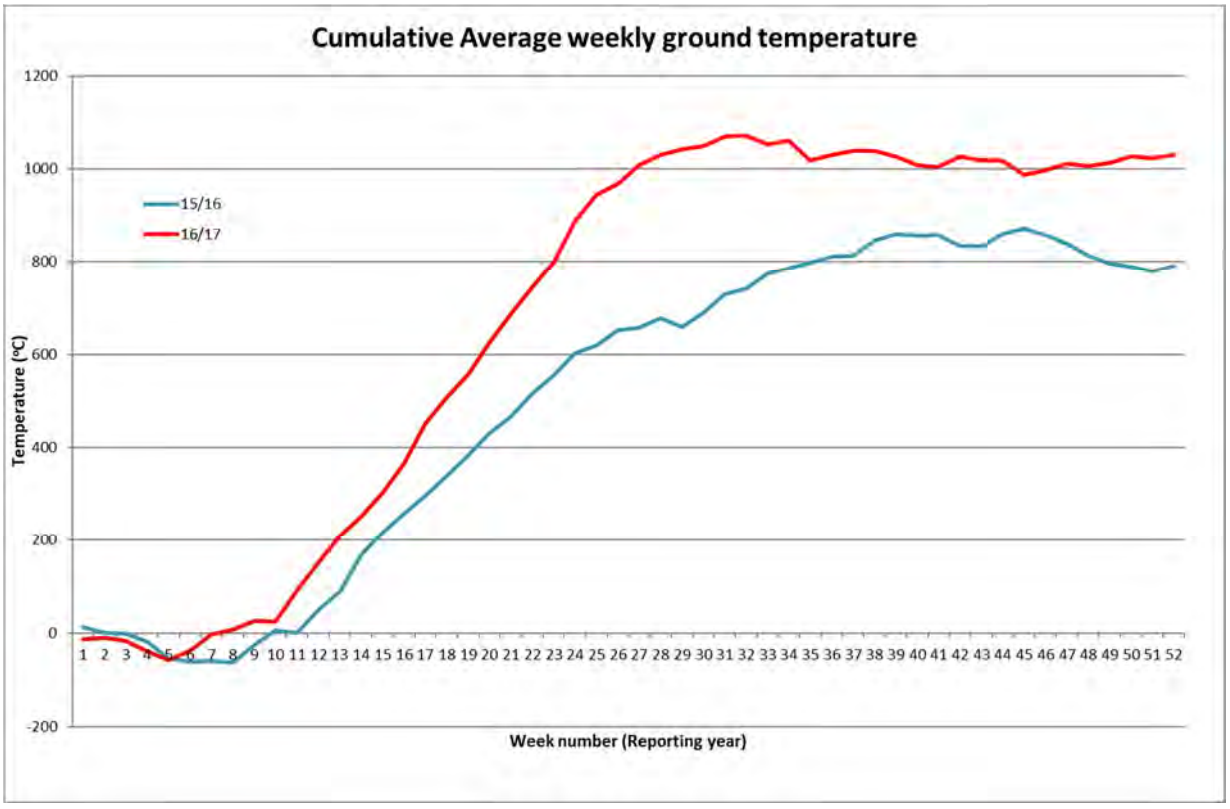

Cumulative Average weekly ground temperature
1200
1000
800
600
400
200
0
-200
15/16
16/17
Temperature (°C)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52
Week number (Reporting year)

Fig 3

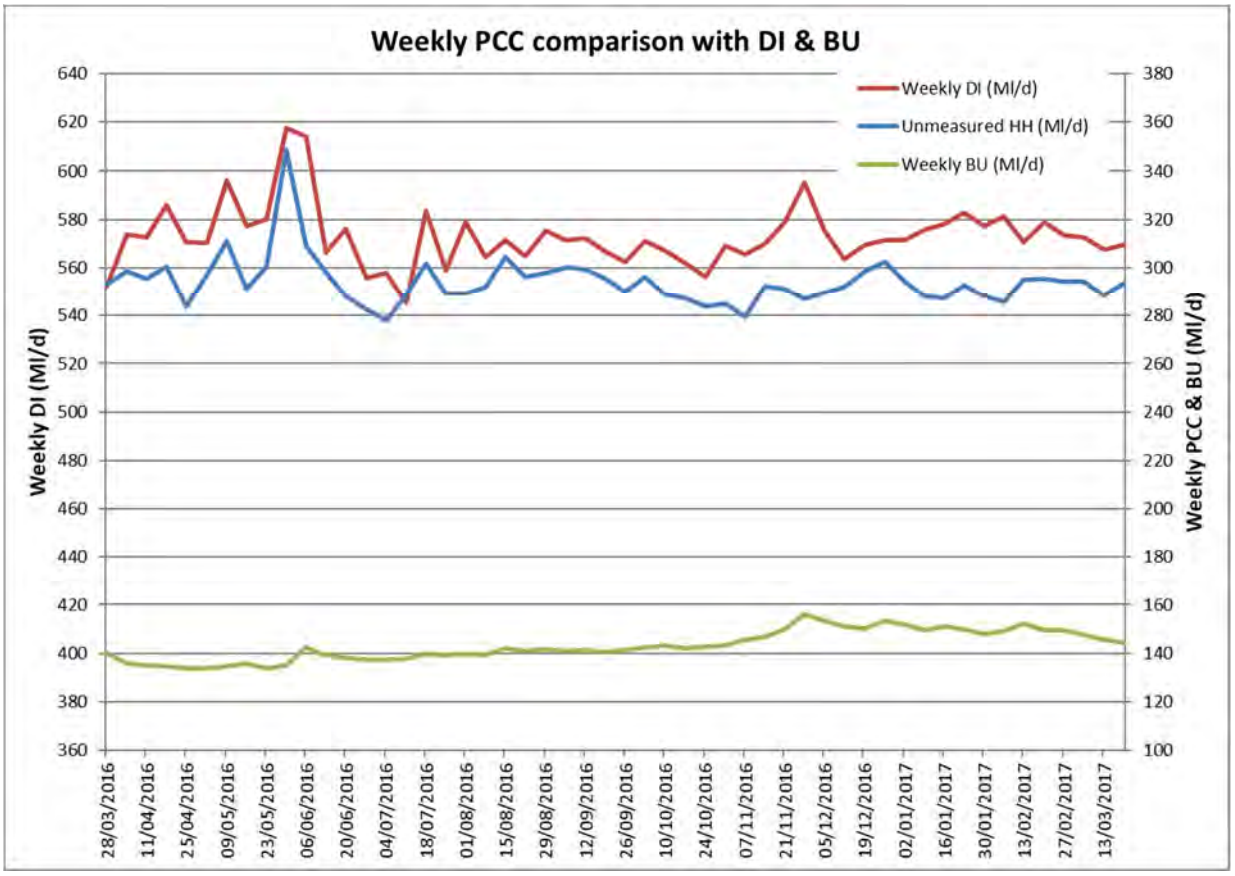


Fig 4

Data Quality

NI Water has remained committed to improve data quality throughout the PC10 and PC13 periods and will continue this commitment throughout PC15.

With Netbase embedded as NI Water's leakage reporting tool, the UKWIR 20th Percentile calculation of Bottom Up leakage remains as reported in AIR16 commentary and in keeping with the Reporter's recommendations the Bottom Up error estimation is 10%. As reported in AIR16, DMA operability decreased from 78% in AIR15 to 73% in AIR16 which was impacted by a telemetry outstation upgrade project and the Netbase update regarding continuously logged users.

NI Water was focussed on recovering operability to prior year levels and reports a DMA operability value of 77% for March 2017. NI Water is focussed on the continued improvement of operability however continues to be impacted by infrastructure upgrades and improvements.

Trunk Mains & Service Reservoirs

With an aspiration towards the use of company specific calculations for all key aspects of the water balance, NI Water continue to build on their trunk main and service reservoir leakage calculation through the primary use of flow balance assessments.

In AIR15, NI Water completed the assessment of trunk main and service reservoir leakage based on flow meter balances, finding that 50% of the trunk main flow balance calculated leakage occurred within 10% of the trunk main flow balance audits. Although NI Water accepts that there may be leakage within these audits, the company is undertaking a number of proactive steps to identify and resolve issues. NI Water considers it prudent to

fully investigate the audits with perceived leakage to understand the resource economics and uncertainty associated with flow balances for trunk mains and service reservoirs.

Gross Measured Consumption

As part of the annual tariff submission to the Utility Regulator, NI Water is required to submit the Principle Statement Information Capture System. One of the consistency checks in this submission is to compare the billed measured non-household volume (Table 10 Line 2) with the Principle Statement and for these volumes to reconcile to within 1%.
Similar to AIR15 & AIR16, the AIR17 reconciliation of both the Gross Measured Consumption Report and Principle Statement has closed to 0%.

HDF

In preparation for the PC15 submission, NI Water commissioned an SELL assessment to determine company leakage targets for submission years AIR16 to AIR21. As part of this review, HDF was assessed based on 2012/13 data and, as a result, it was deemed appropriate to update the HDF for AIR14 to 23.2. As part of continuing data enhancements, NI Water have commenced work on the development of a pressure model utilising Netbase, the comprehensive pressure managed area study (2500+ PMAs) and permanent pressure monitoring points (1500+ pressure points). This model will allow NI Water to calculate HDF on a more regular basis and it is envisaged that the reported HDF will be introduced during the PC15 period. An interim HDF value will be calculated as part of the current SELL and is expected to be completed by the end of 2016/17.

Meter Under Registration

It should be noted that the NIAUR has determined that, during the PC15 period, the non-household meter under registration (NHH MUR) figure shall reduce from 8.33%, which was derived for AIR10 by WRc utilising the NI Water meter age profile and meter sample tests, to 5.5% which is understood to be the current NHH MUR average for E&W companies. This reduction in NHH MUR is planned to be implemented linearly over the six years of the PC15 period, however it is proposed that a company specific MUR study will be commissioned during PC15.

NI Water has acknowledged a risk to the water balance calculation in applying an unsubstantiated MUR figure which is moving the company away from the excellent work undertaken over recent years in terms of developing company specific data.
For AIR17, NHH MUR has been updated to 7.39%. NI Water initiated both a non-household consumption MUR study and PCC monitor MUR study during AIR17.

Leakage Capital Investment

The PC15 leakage business plan clearly identified a number of key areas of capital investment to replace and improve our network/assets as well as the ongoing improvement in data availability and quality.

The upgrade of DMA meters from GSM logger technology to telemetry status remains a high priority project thus providing access to continuous data to assist leakage management, NI Water and the customer. At present 92% of all DMA sites are now monitored directly through telemetry with the remaining returning data via GSM loggers. This work is proposed to continue in the PC15 period. This has increased data availability and quality to enhance leakage monitoring, targeting and reporting as well as being available during major incidents.

During 2016/17 projects were carried out to replace existing PRV stock that are operational across the network and to design, install and commission new PRV sites to optimise leakage reduction. This has resulted in 35 PRV replacements and 16 new PRV installations during the year.

DMA optimisation continues to play an important role within the success of the function. In 2016/17 the resolution of High Volume DMAs has played a key part in this. The underlying objective has been initially to investigate the unique factors that cause these DMAs to behave in such a manner and subsequently to provide an engineering solution where possible to reduce leakage.
As work has continued in regards to High Volume DMA studies, DMA optimisation and data quality improvements has resulted in excess of 220 infrastructure improvement schemes being identified and installed as part of the overall capital improvement programme.

For reference, the table below states the variables/parameters which may impact upon the variance in individual water balance component calculations.

	AIR17	AIR16
HDF (hrs)	23.2	23.2
UNHH consumption (m3/yr)	190.60	187.19
PCC MUR (%)	7.39	7.39
HH occupancy (nr)	2.53	2.53
NHH MUR (%)	7.39	7.86
SPL (Ml/d)	39.91	39.91
HH night use allowance (l/p/hr)	2.42	2.42
NHH night use allowance (l/p/hr)	dynamic	dynamic
Per Capita Consumption (l/hd/d)	136.70	133.63

Lines 1 to 3 – Billed Measured Household and Non-Household Volumes

Line 1 – Billed Measured Household

There are no billed measured households and the value is therefore zero.

Line 2 – Billed Measured Non-Household

The reported value for water delivered to non-households has increased from 118.03 Ml/d in AIR16 to 120.58 Ml/d in AIR17.

In AIR15, after a full review, the Gross Measured Consumption Report (GMCR) was revised, amended and recoded to reflect the changes in data handling and the evolution of the metering and property company datasets which resulted in the variance between the GMCR and the Principle Statement calculations closing within the recommended 1%.
For AIR17, the variance between GMCR and the Principle Statement has been calculated and closes to 0%. The GMCR is used to derive the billed measured non-household consumption as stated in Table 10 Line 2.

Similar to AIR16, the GMCR utilises metering data from the RAPID billing system. This volume does not include test meters that are not billed, trade effluent volumes, free supplies or NI Water supplies which are included under water taken unbilled.

A non-household meter under-registration (MUR) value of 7.39% has been added to billed measured non-household use. It should be noted that the NIAUR has determined that, during the PC15 period, the non-household meter under registration (NHH MUR) figure

shall reduce from 8.33%, which was derived for AIR10 by WRc utilising the NI Water meter age profile and meter sample tests, to 5.5% which is understood to be the current NHH MUR average for E&W companies.

This reduction in NHH MUR is planned to be implemented linearly over the six years of the PC15 period, however it is proposed that a company specific MUR study will be commissioned during PC15. NI Water initiated non-household consumption MUR study during AIR17.

No allowance for underground supply pipe leakage has been added to this value as the measured non-households are all externally metered and therefore the billed consumption already includes underground supply pipe leakage (however, the figure for underground supply pipe leakage for measured non-households has been estimated and is part of total leakage in other lines of the table).

The confidence limit of 10% on this component has not been changed and is still considered to be appropriate.

Line 3 – Billed Measured

This is the summation of lines 1 and 2.

Lines 4 to 6 – Billed Unmeasured Household and Non-Household Volumes

Line 4 – Billed Unmeasured Household

The reported value for Billed Unmeasured Household volume for AIR17 is 302.76 Ml/d. This figure represents an increase of 7.90 Ml/d (2.7%) from the AIR16 value of 294.86 Ml/d. The cumulative effect of the calculated PCC figure for AIR17 having increased by 0.8% and the natural increase in household population of 11,350 has resulted in an increased unmeasured household volume.

The Billed Unmeasured Household volumes have been calculated by multiplying the average PCC figure for NI Water by the unmeasured household population. The method and sources of information are consistent with previous AIR returns. Similarly the source of the PCC figure is generated from the NI Water domestic consumption monitor. The household population figure is sourced from the Northern Ireland Statistics and Research Agency (NISRA) 2014. Adjustments are made to this household population figure to account for:

- Non-Household Population – Sourced from the most recent NISRA 2014 based population projections in alignment with Table 7.
- Unconnected Properties Population – The number of unconnected properties has been provided within NI Water by Rapid. The population of unconnected properties is determined by multiplying the assessed average occupancy from the NIHE Housing Condition Survey report by the number of unconnected properties.
- Farm Population – The population of farms is included as non-household use. The population is calculated as the number of farms multiplied by the average occupancy rate from NISRA. The number of farms is sourced from RAPID (NI Water's Billing System). The assessment takes into consideration farm properties that became void during 2016/17 but will have billed consumption associated with them.
- PCC Night Use Allowance Assessment

Underground Supply Pipe leakage has been applied to the billed unmeasured household volume component of this calculation.

A meter under registration factor of 7.39% has been applied to this total volume. This percentage was assessed by WRc for AIR10 and is specific to NI Water's domestic consumption monitor meters and has remained constant. NI Water initiated PCC monitor MUR study during AIR17.

During the reporting year work has continued to maintain the reliability of this value:

- A comprehensive door to door survey of approximately 27% of the Domestic Consumption Monitor Areas. The data from the 2016/17 surveys has been input into the AIR17 consumption monitor assessment. The overall occupancy rate is 2.39 for AIR17 compared to an occupancy rate for AIR16 of 2.43. The NISRA occupancy rate for Northern Ireland is 2.53 for 2016/17.
- A figure of 1.5% continues to be applied to allow for the 'Hawthorne Effect' and is consistent with previous AIR submissions.
- Use of company specific MUR value as determined by WRc.

The confidence limit of 10% on this component has not been changed and is considered to be appropriate.

It was noted during the AIR16 audit that household occupancy rates, from NISRA, changed from 2.43 to 2.53 after the NISRA publication of the '2012-based projections' which superseded the previously used '2008-based projection' publication.
NI Water have undertaken a sensitivity analysis of this parameter and the effect it has upon the AIR17 reconciled leakage calculation. The following table illustrates the impact of varying occupancy:

Occupancy	Line 4 – Ml/d (pre MLE)	Line 4 – Ml/d (post MLE)	Reconciled leakage –Ml/d	Imbalance
2.40	296.34	303.11	163.34	1.95%
2.43	**296.21**	**303.05**	**163.36**	**1.97%**
2.45	296.12	303.02	163.38	1.99%
2.50	295.89	302.92	163.42	2.03%
2.53	**295.74**	**302.76**	**163.43**	**2.03%**
2.55	295.66	302.83	163.46	2.07%
2.60	295.44	302.74	163.51	2.11%

Although the occupancy rate variance from 2008-based and 2012-based NISRA projections increases reconciled leakage by only 0.08 Ml/d, more significantly it has an impact on the overall leakage confidence grade moving it from A2 to B2 as the percentage imbalance swings from 1.97% to 2.03%.
The calculated occupancy rate from 4813 occupied properties within the PCC monitor is 2.39. If applied, the overall leakage confidence grade would remain as A2.

Line 5 – Billed Unmeasured Non-Household

The reported value for Billed Unmeasured Non-Household for AIR17 is 5.17 Ml/d. The value reported in AIR16 was 5.28 Ml/d. NI Water has continued with a programme of meter installation of unmeasured non-household properties.

The assessed unmeasured non-household figure for AIR17 is 190.60 m^3/prop/yr, which is an increase compared to a figure of 187.19 m^3/prop/yr for AIR16. As these unmeasured non-households have an allowance that has been estimated from metered non-households then underground supply pipe leakage has not been included in this figure. A non-household company specific MUR value of 7.39% is applied for AIR17.

The confidence limit of 15% on this component has not been changed and is considered to be appropriate.

Line 6 – Billed Unmeasured

This is the summation of lines 4 and 5.

Lines 7 to 30 – Water Delivered Components

Line 7 – Estimated Water Delivered Per Unmeasured Non–Household

The post MLE figure for estimated water delivered per unmeasured non-household for AIR17 is 601.02 l/prop/d. The figure reported for AIR16 was 595.87 l/prop/d.

The allowance for unmeasured non-household properties for AIR17 is 190.60 m^3/prop/yr. The calculated figure for AIR16 was 187.19 m^3/prop/yr.

Line 7a – Estimated Water Delivered Per Unmeasured Household

The post MLE figure for estimated water delivered per unmeasured household for AIR17 is 422.25 l/prop/d. The figure reported for AIR16 was 418.97 l/prop/d.

Line 8 – Per Capita Consumption (Unmeasured Household – Excluding Supply Pipe Leakage)

The post MLE PCC figure for AIR17 is 151.89 l/hd/d. The figure reported for AIR16 was 148.42 l/hd/d.

NI Water continues to employ domestic consumption monitors set up specifically to monitor unmeasured household consumption. These sites are small (average size of 47 properties), permanently bounded, monitored for leakage, and flows into them are recorded by meters.

The average PCC figure (pre MUR) has been calculated as 136.70 l/hd/d. This assessment is based on 12 months consumption data from 1 April 2016 to 31 March 2017. This compares to a figure of 133.63 l/hd/d for AIR16.

A company specific MUR value of 7.39% has been used for unmeasured PCC. This figure has been provided by WRc as a result of a project commissioned by NI Water and is specific to NI Water's domestic consumption monitor meters.

A company specific domestic consumption monitor MUR study has been initiated and it is expected that this study will be completed by the end of the AIR18 reporting period.

Line 9 – Per Capita Consumption (Measured Household - Excluding Supply Pipe Leakage)

There are no measured household supplies in NI Water; therefore no value has been input against this line.

Lines 10 to 13 – Underground Supply Pipe Leakage

For PC13, NI Water engaged their Leakage Management Services consultant, RPS, to review the underground supply pipe assessment which has resulted in the reduction of total supply pipe leakage to 39.91 Ml/d from 46.31 Ml/d during PC10. This accounts for approximately 24% of total leakage.

The total volume of Underground Supply Pipe Leakage has been assessed using the recommended methodology contained in the UKWIR report 'Towards Best Practice for the Assessment of Supply Pipe Leakage' and based on 2012/13 company data.

As SPL has remained constant at 39.91 Ml/d throughout the PC15 period, it is required to adjust the 'per property' assessed underground supply pipe unit values on an annual basis due to increasing property numbers. Therefore, the assessed SPL unit values of 52.49 & 26.25 l/prop/d, for unmeasured and measured properties respectively, require adjustment as they have been calculated using 2012/13 base year data resulting in a total SPL of 39.91 Ml/d. The SPL assessment will remain unchanged for the duration of the PC15 period as agreed with NIAUR, therefore the adjusted AIR17 unit values are 49.62 l/prop/d for unmeasured, other households and void properties, with a value of 24.81 l/prop/d being calculated for externally measured non-households.

Work previously undertaken, utilising Ofwat published data, indicated that the majority of the water companies in England and Wales estimate the underground supply pipe leakage on externally measured properties to be approximately half that of internally measured and other properties. NI Water has continued to adopt this assumption. In NI Water, the unmeasured non-household use is based on the measured non-household use. Therefore this assumption will also be applied to the unmeasured non-household.

The SPL calculation for NI Water is detailed in the NI Water Assessment of Leakage from Customer Supply Pipes (carried out by RPS) and has be reassessed in parallel with the AIR17 commissioned SELL study. It should be noted that the trend over recent reporting years has shown that the number of unreported customer side leakage defects, resulting in the issue of a Leak Notice, has increased by 20% since the last SPL review utilising 2012/13 base data.

Lines 14 to 15 – Meter Under-Registration

It should be noted that the NIAUR has determined that, during the PC15 period, the non-household meter under registration (NHH MUR) figure shall reduce from 8.33%, which was derived for AIR10 by WRc utilising the NI Water meter age profile and meter sample tests, to 5.5% which is understood to be the current NHH MUR average for E&W companies. This reduction in NHH MUR is proposed to be implemented linearly over the six years of the PC15 period. NI Water initiated both a non-household consumption MUR study and PCC monitor MUR study during AIR17.

NI Water has acknowledged a risk to the water balance calculation in applying an unsubstantiated MUR figure which is moving the company away from the excellent work undertaken over recent years in terms of developing company specific data.

For AIR17, NHH MUR has reduced to 7.39%. Furthermore the MUR value applied to the unmeasured household consumption remains at 7.39%.

Line 16 – Distribution System Operational Use

The reported value of Distribution System Operational Use (DSOU) for AIR17 is 2.93 Ml/d. The value reported for AIR16 was 3.05 Ml/d.
This calculation is consistent with the AIR16 methodology.

The confidence limit of 25% on this component has not been changed and is considered appropriate.

Lines 17 to 19 – Water Taken Unbilled

The reported Water Taken Unbilled figure of 17.08 Ml/d in AIR17 is a small decrease from the value of 17.18 Ml/d in AIR16.

As a result of the findings and subsequent amendments to the gross measured consumption report, as discussed within the Data Quality section of this commentary, an element of billed measured NHH consumption reported in AIR17 has been transferred into the water taken unbilled component of the water balance.

The methodology used to estimate each category within Water Taken Unbilled remains consistent with AIR16 with the addition of the 'NHH property review project' category which estimates the consumption currently not captured as billed measured non-household but the likely consumption billed after surveying is completed.

Line 20 – Water Delivered (Potable)

All potable water supplied by NI Water is calculated as the sum of lines 3, 6 and 19.

Line 21 – Water Delivered (Non-Potable)

There are no non-potable supplies to NI Water customers.

Line 22 – Water Delivered (Non-Standard Rates: Potable)

There are no non-standard rates for potable supplies to NI Water customers.

Line 23 – Water Delivered (Non-Standard Rates: Non-Potable)

There are no non-standard rates for non-potable supplies to NI Water customers.

Line 24 – Distribution Losses

Distribution Losses for NI Water are calculated by subtracting Lines 16 (DSOU) and 20 (Water Delivered) from Line 26 (Distribution Input). Distribution Losses for AIR17 are estimated to be 123.52 Ml/d. This is an increase on the AIR16 figure of 122.08 Ml/d.

Line 25 – Total Leakage

Total leakage is the sum of distribution losses and underground supply pipe leakage. The reported figure for total leakage for AIR17 is 163.43 Ml/d. The reported figure for AIR16 was 161.99 Ml/d.

Total leakage is also calculated using an MNF methodology. For AIR17 the reported pre MLE MNF method leakage is 161.33 Ml/d. The figure reported for AIR16 was 159.96 Ml/d and equates to an increase in BU leakage of 1.37 Ml/d.

NI Water has an extensive DMA network (approx. 1090 DMAs) covering 98% of all properties in Northern Ireland. Approximately 92% of these DMAs are now monitored with electromagnetic meters with a direct link to the company telemetry system. The remaining DMAs are monitored through mechanical meters using GSM flow loggers. Whilst GSM loggers have an automatic link to the company's telemetry system they do not have the facility to provide real-time data but provide a 24 hour daily download.

DMA minimum night flow (MNF) continues to be determined using a 20th percentile method. Minimum night flows are recorded on a daily basis. The company specific night use allowance for households remains at 2.42 l/prop/hr as calculated by Crowder Consulting for AIR10. It is proposed to review the household night use figure during AIR18.

The measured non-household night use allowance figure for AIR13 was 8 l/prop/hr as documented in 'Managing Leakage', however as stated in the AIR14 commentary, Netbase has become the leakage reporting tool for AIR14 onwards which utilises an integrated night use model embedded within Netbase which was developed based on the best practice as outlined in the UKWIR Report 'Estimating Legitimate Non-Household Night Use Allowances' for AIR10. This model was calibrated using approximately 1000 customer datasets and dynamically assesses night use based on consumption and consumer industry type. The equivalent industry weighted measured non-household night use figure for AIR17 is approximately 20 l/prop/hr.

It is proposed to review the non-household night use assessment through the initiation of a representative consumption logging programme during AIR18. This will be consistent with current industry best practice.

According to the guidance provided the reporting requirements for this line calculates total leakage by adding Distribution Losses (line 24) to the various calculated SPL components for MHH, UHH, MNHH, UNHH & voids. The SPL figure was reassessed for the PC13 period as 39.91 Ml/d. It is proposed that SPL will be reassessed during the PC15 period and as part of an SELL study. As agreed with NIAUR for the inclusion of stable data during a PC reporting period, total customer SPL remains at 39.91 Ml/d, however it should be noted that the trend over recent reporting years shows that the number of unreported customer side leakage defects, resulting in the issue of a Leak Notice, has increased by 20% since the last SPL review utilising 2012/13 base data.

Similarly, NI Water's service reservoir leakage and trunk main leakage remains constant at 4.53 Ml/d and 13.66 Ml/d respectively. NI Water has continued to develop a company specific assessment for both trunk main and service reservoir leakage based on a flow balance methodology. This is consistent with the recommendations of the Reporter and Utility Regulator.

NI Water continues to investigate potential leakage within these audits and is undertaking a number of proactive steps to identify and resolve leakage issues.
However, NI Water consider it prudent to fully investigate the audits with perceived leakage to understand the resource economics and uncertainty associated with flow balances for trunk mains and service reservoirs.Further work is required to refine NI Water's estimate and methodology particularly in relation to meter uncertainty. NI Water have engaged with other England & Wales water companies along with Scottish Water with a view of undertaking a joint research project into large diameter meter uncertainties in conjunction with WRc.In addition, NI Water will review the recently published UKWIR report "Leakage Upstream of District Meters", and will assess trunk main and service reservoir leakage with a view to meet best practice.

A 10% error estimate has been applied to BU Leakage in the MLE calculation following the implementation of Netbase for PC13. This reflects the continued improvement in data quality resulting in the reduction of the error estimate from 15% reported in AIR13.

Line 26 – Distribution Input

The distribution input figure for AIR17 has been calculated as a post MLE figure of 572.04 Ml/d. The distribution figure for AIR16 was 560.48 ML/d.The company specific confidence interval for distribution input for AIR17 remains at 2.1% and is unchanged from AIR16.

The method of reporting and calculating the company distribution input figure remains consistent in that it is based on a definitive number of input meters. As in previous years, NI Water has continued with an annual programme of calibration of DI meters.

In line with the guidance provided, details of the distribution input for each of the PPP Water Treatment Works site is as follows

	pre-MLE (Ml/d)	post-MLE (Ml/d)
Ballinrees	29.33	29.27
Castor Bay	122.18	121.92
Dunore Point	93.26	93.06
Moyola	15.10	15.07
Total	**259.87**	**259.32**

Line 27 to 28 – Bulk Supply Imports / Exports

There are no bulk imports of water to NI Water. There is one small import from the Republic of Ireland which supplies 3 properties.

There are 72 small exports to the Republic of Ireland. These exports are predominately individually metered customers and these meters are read and billed through RAPID in a category known as cross border supplies. This figure is included in the metered non-household consumption category.

The post MLE volume amounts to 0.34 Ml/d and includes an MUR adjustment of 7.39%.

Line 29 – Water Treated At Own Works to Own Customers

With the exception of the 72 small exports above, all water treated at its own works is used by NI Water's own customers. The post MLE distribution input volume amounts to 572.02 Ml/d and deducting the cross border exports the volume of water treated at NI Water's own works to its own customers is 571.70 Ml/d.

Overall Water Balance

AIR17 - Water Balance						
NIW	**Pre MLE** (mld)	**Error estimate** (%)	**Confidence Range** (mld)	**% of total**	**MLE Adjustment** (mld)	**Post MLE** (mld)
Billed Measured HH	0.00	10%	0.00	0.0%	0.00	0.00
Billed Measured NHH	119.43	10%	142.64	9.9%	1.15	120.58
Billed Unmeasured HH	295.74	10%	874.60	60.5%	7.03	302.76
Billed Unmeasured NHH	5.16	15%	0.60	0.0%	0.00	5.17
SPL	39.91					39.91
DSOU	2.92	25%	0.53	0.0%	0.00	2.93
Water Taken Unbilled	16.94	25%	17.94	1.2%	0.14	17.08
Sum of components	561.62					572.04
Distribution Input	573.23	2%	149.08	10.3%	1.20	572.04
Top Down Leakage	**172.95**					
BU Leakage	**161.33**	10%	260.28	18.0%	2.09	**163.43**
Imbalance (mld)	**11.62**			100.0%		
% Imbalance	**2.03%**					**448.52**

Table 1: Water Balance

The Water Balance produces an overall imbalance of 11.62 Ml/d, (2.03%). The imbalance reported for AIR16 was 11.01 Ml/d, (1.96%).

It is considered that in applying the confidence grade in accordance with the guidance notes contained in Table 10 of the NIAUR Annual Information Return Reporting Requirements and Definitions Manual 2017, the confidence grade applied to the NI Water's water balance for AIR17 is B2. The confidence level for the overall water balance for AIR16 was A2.

Confidence Grades

All components in the water balance are subject to errors to a greater or lesser extent, and as a method of comparing the accuracy and robustness of water balance components, NIAUR use an Alpha-numeric confidence grading system consisting of reliability bands (A to D) and Accuracy Bands (1 to 6).

NI Water adopted this approach a number of years ago and the current confidence grading for the water balance are shown in Table 2 below.

Line 7 – The Unmeasured Non-household Water Delivered confidence grade remains a B4 for AIR17.
An error estimate of 15% has been applied to this component in the MLE calculations.

Line 7a – Unmeasured Household Water delivered has been assigned a B3 confidence grade.

Line 8 - Unmeasured Household Per Capita Consumption has a confidence grade of B3. This component has been calculated using the company's own consumption monitor data. An error estimate of 10% has been applied to this component in the MLE calculations.

Line 25 - Total Leakage has a confidence grade of B3 for AIR17 and is consistent with AIR16.
A 10% error estimate has been applied to BU Leakage in the MLE calculation following the implementation of Netbase for PC13. This reflects the continued improvement in data quality resulting in the reduction in error estimate from 15% reported in AIR13.

Line 26 - Distribution Input has a confidence grade of B2. The sum of components and the distribution input balance to less than 5%.
A 2.1% error estimate has been applied to DI in the MLE calculation.

Line 30 - In accordance with the definition provided by NIAUR the Overall Water Balance had a confidence grade of B2 in AIR17.

It is considered appropriate that the confidence grade for AIR17 is B2, as the water balance components reconcile with measured distribution input between 2% & 5%. Similar to AIR16, Bottom Up leakage is estimated with over 80% of properties continually monitored through night line analysis (recorded more than 20 times per year) and sample flow balance audits have been undertaken on service reservoirs and trunk mains.
This is a decrease from the AIR16 confidence grade of A2 due to the imbalance being marginally greater than 2% however as the imbalance has materially only increased by 0.1%, this provides confidence that the AIR17 reconciled leakage calculation remains consistent.

Table 2 Water Delivered Components Confidence Grades

Component	Reliability Bands				Accuracy Bands						
	A	B	C	D	1 <1%	2 1-5%	3 5-10%	4 10-25%	5 25-50%	6 50-100%	X
Unmeasured Non-Household Water Delivered (l/prop/d)											
Unmeasured Household Water Delivered (l/prop/d)											
Unmeasured Household Per Capita Consumption (l/head/d)											
Total Leakage (Ml/d)											
Distribution Input (Ml/d)											
Overall Water Balance											

Lines 31 - Security of Supply

Security of Supply is discussed in Table 10a.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 10A NON FINANCIAL MEASURES

SECURITY OF SUPPLY INDEX - PLANNED LEVEL OF SERVICE (TOTAL)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Water resource zone	**WAFU (EA definition) (Ml/d)**	**Bulk imports (Ml/d)**	**Bulk exports (Ml/d)**	**Dry year distribution input (Ml/d)**	**Reporting year distribution input (Ml/d)**	**Dry year available headroom (Ml/d)**	**Target headroom (Ml/d)**	**Surplus/ deficit (Ml/d)**	**Percentage surplus/ deficit (Ml/d)**	**Zonal population**	**Percentage of total population with headroom deficit**	**Zonal index (%age deficit^2 x % population affected x 100)**	**Security of supply index**
North	55.08	50.00	0.00	74.48	73.70	30.60	4.73	25.87	3265.72%	256.079	0%	0.000	
West	75.07	0.00	0.00	63.80	63.13	11.27	4.89	6.38	929.07%	166.275	0%	0.000	
Central	11.86	19.00	0.00	26.80	26.52	4.06	1.98	2.08	720.94%	72.963	0%	0.000	
East	146.51	207.00	0.00	256.46	253.80	97.05	19.47	77.58	2811.57%	939.994	0%	0.000	
South	70.17	127.00	0.00	157.71	156.08	39.45	13.00	26.45	1549.58%	426.269	0%	0.000	
Total	**358.68**	**403.00**	**0.00**	**579.25**	**573.23**					**1861.580**		**0.000**	**100.000**

Table 10a (i) – Non Financial Measures - Security of Supply Index – Planned level of service

NI Water published its Water Resource Management Plan (WRMP) in 2012, which covers the period 2010-2035. The Security of Supply Index (SoSI) calculated for AIR17 is based on Ofwat's letter RD 03/02, and is formulated from the information presented in the WRMP.

The WRMP has adopted the latest methodology for producing water resource management plans. There has been no change in the reported SOSI from AIR 16. For 2016/17 the SoSI remains 100. This is mainly due to the following reasons:

The Water Available for Use has remained unchanged. The Distribution Input (DI) has increased slightly from last year. In 2015/16 the total average DI was 561.62 Ml/day this has risen by 0.021% to 573.23 in 2016/17, this is based on the Post Maximum Likelihood Estimation (MLE) figure.

There are also a number of other factors that influence the AIR17 SoSI calculation. These include:

- There is a significant interaction between South and East water resource zones (WRZs). The WRMP indicates it is likely that circa 20Ml/d from Castor Bay is actually used within the East WRZ. This reallocation of Water Available for Use (WAFU) between East and South is believed to be a more accurate reflection of the actual situation on the ground.
- The Water Available for Use (WAFU) across Northern Ireland remains at 358.68Ml/.d (static figure).
- Outage allowance for NI Water WTWs remains at 2% as indicated in the WRMP for the period 2010-2035.
- For this calculation, it has been assumed that the bulk imports from the PPP WTWs are available at the contracted volumes as set out in the WRMP.

The total population figure used within the SoSI calculation has been confirmed to correspond with the population figure used in AIR 17 Table 7.

As part of the Reporters Recommendations for AIR17, he stated that *'Recommend as part of the WMRP update the Company continues to investigate if data exists to further refine the normal year uplift.'*

NI Water is currently developing the 2017 Water Resource and Supply Resilience Plan (WR&SRP), and some initial outputs are available and these have been used in the calculation of the uplift factor. For the Draft 2017 WR&SR Plan, the value calculated for the dry year uplift factor was 1.70%. This was obtained from applying the monthly demand-weather model, developed as part of the 2017 WR&SR Plan process, to the dry weather year 1995/96. This estimates that average DI would be 1.70% higher in a dry year (like 1995/96) than in a normal weather year.

It should be noted that, based on analysis carried out on historical rainfall and temperature data from 1988 to 2017, 2016/17 is deemed as a "Warm & Dry" year as can be seen in Figure 1 below. The monthly demand weather model was populated with the outputs for 2016/17 and this estimates the average DI would be 1.05% higher in a dry year (like 1995/96) than in 2016/17. Thus, an uplift factor of 1.0105 has been used in the SOSI calculation.

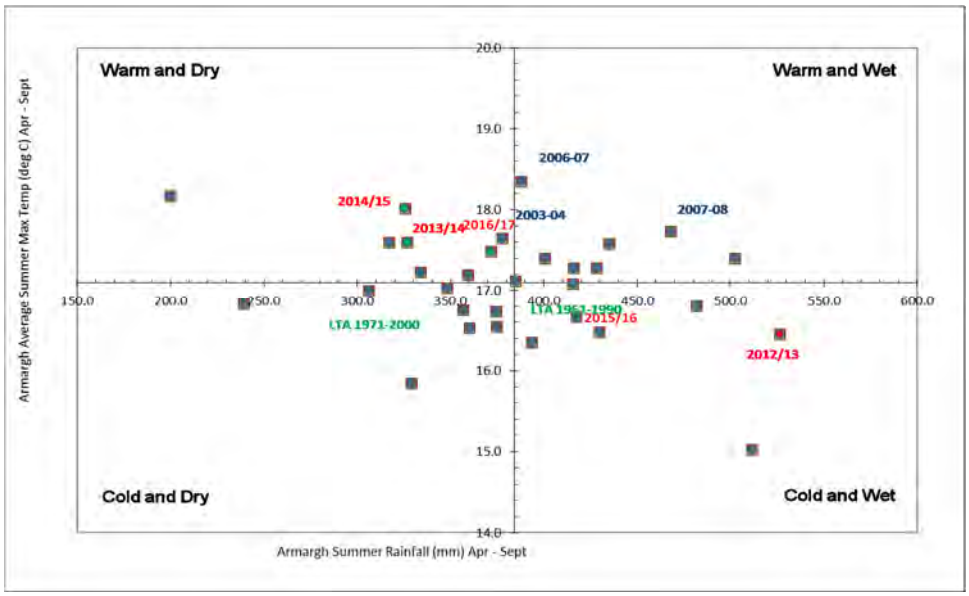


Figure 1 – Historical rainfall & Temperature Data Summer (April-September)

The calculation for AIR17 is believed to be an accurate reflection of the current NI Water SoSI based on the 2012 WRMP.

As previously described, NI Water is currently updating the Water Resource and Supply Resilience Plan (WR&SR Plan) which will be published later in 2017. A SoSI figure based on the draft outputs on this latest plan has been calculated and the estimated figure is 99.98. There have been changes to a number of the inputs in the calculation, based on the Draft 2017 WR&SR Plan, that would account for the difference and these are detailed below.

1. The 2017 WR&SR Plan has seen the creation of two additional WRZs, increasing from 5 WRZs to 7 WRZs:
    a. The 2012 West WRZ has been split into two zones, the West WRZ and the South West WRZ. The reason for this split is the lack of connectivity across the new WRZ boundary resulting in differing levels of risk between the zones.
    b. The 2012 South and East WRZs have been split into 3 zones (South, East and North East) which better reflect the operation of the supply system.
    c. Supply to Belfast has been combined into the new East WRZ, as there is extensive interconnectivity in this area.
    d. The selection of the North East/East resource zone boundary is based on the limited connectivity between the Water Supply Zones (WSZs) along this boundary. The exception is the bulk transfer from Dunore Point WTW, in the North East Zone, to Hydepark Service Reservoir (SR), in the Eastern Zone. However, as this provides a distinct and measured boundary point this was considered an appropriate border.
    e. The selection of the South/East boundary is based on the lack of interconnectivity between the WSZs along this line. While both zones have supplies from Castor Bay WTW, they both have their own dedicated trunk mains direct from the WTW.

f. Rathlin Island has been included in the North WRZ as in the event of a water shortage on Rathlin, water from the North WRZ is tankered in to meet the shortfall.

2. The latest Water Available for Use figure (WAfU) has increased from the 2012 plan by 12.09Ml/d to 773.78Ml/d and changes detailed below.
   a. Table 1 below shows the comparison of the 2017 WR&SR Plan Baseline DO estimates with the results from the WRMP 2012. Overall, the total DO for Northern Ireland appears to have had little change from the previous assessment. The WR&SR Plan Baseline DO estimate (using DYAA LoS) for Northern Ireland has been calculated as 814.5 Ml/d, which is around a 25 Ml/d increase from the 789.2 Ml/d overall DO from the previous plan assessment. In order to facilitate the comparison between the two assessments, the WRZs have been based on the WRMP 2012 WRZ boundaries. Therefore, the South, East and North East WRZs DO estimates have been combined to compare to the WRMP 2012 East and South WRZ DO estimates. The DO results from West WRZ and South West WRZ have also been combined in order to compare to the West WRZ estimates of the WRMP 2012.

Table 1: Comparison of 2017 WR&SR Plan and 2012 WRMP Baseline DO Estimates

WRZ (based on WRMP 2012 WRZs)	WRMP 2012 DO (Ml/d)	WR&SR Plan DO (DYAA) (Ml/d)	Comments
North	115.6	113	
South and East	553.4	590	Camlough WTW has been decommissioned. Differences in constraints including Drumaroad WTW capacity Lough Island Reavy modelled as a permanent source for Fofanny WTW Hydrological differences due to length of record and revised inflow sequences
Central	31.1	32.5	Slight increase in Lough Fea output.
West	89.1	79	The differences are likely mostly due to different assumptions made on the license restrictions at the Derg/Strule.
NI Total	**789.2**	**814.5**	

   b. The outage allowance for NI Waters WTWs has increased from 2%, used in the previous plan, to 5%. This was based on the available data for analysis, expert opinion as part of the 2017 WR&SR Plan, and benchmarked against a review of UK water companies' data that showed that outage ranges from 2% to 8%.

3. The dry year uplift factor has decreased in the latest plan from 7% in 2012 to 1.7%. As described previously the 2017 WR& SR Plan figure was obtained from applying the monthly demand-weather model, developed as part of the 2017 WR&SR Plan process, to the dry weather year 1995/96.

It should be noted that only one zone indicates a headroom deficit, based on the 2017 WR & SR Plan SoSI calculation, which is the Western Zone. The draft 2017 WR&SR Plan has identified a scheme for this zone that will mitigate against any potential deficits once implemented. This is:

- Western Zone - Carmoney WTW to Strabane 17 Ml/d Trunk Main

Table 10a (iii) – Non Financial Measures - Security of Supply Index – Critical Period (TOTAL)

The security of supply index has been calculated based on the outputs from the Water Resource Management Plan (WRMP) 2012.

In previous years, the assumption by NI Water was that a SOSI – Critical Period has not been required. The previous justification has been that:-

The supplies available to NI Water are dominated by abstractions from Lough Neagh, which can be considered an infinite hydrological storage resource. In addition, recent demand data does not suggest that there is a strong peak demand driver in Northern Ireland. For these reasons, it is not appropriate or necessary to consider the critical period scenario for Northern Ireland, because this is not the primary driver for investment to maintain the supply demand balance. On this basis, there has been no need for NI Water to develop a SOSI calculation for a critical period.

As part of the Reporters Recommendations for AIR15, he stated- *Recommend the Company reassess the need for a Critical Period SOSI during its preparation of WRMP17.*

As highlighted in AIR16 as part of the 2017 WRMP, critical periods were included within the analysis and it was felt a critical period SOSI should be available for AIR17. However there has been some slippage in the delivery of the draft plan and as consequence it will be AIR18 before the outputs could be used for the development of a critical period SOSI.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 11 NON FINANCIAL MEASURE
WATER SERVICE ACTIVITIES (NI Water Only

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**ASSET BALANCE AT APRIL 1**																				
1	Total length of mains	km	2	26,499 03	B3	26,700.79	B3	26,710.55	B3	26,712.44	B3	26,728.83	B3								
B	**CHANGES DURING REPORT YEAR**																				
2	Mains renewed	km	2	285.42	A2	202.31	A2	164 91	A2	105 24	A2	161.29	A2								
3	Mains relined	km	2	0 00	A1	0.00	A1	0 00	A1	0.00	A1	0.00	A1								
4	Mains cleaned (total)	km	2	683.75	B3	1,096.52	B2	1,189.50	B2	1,191 68	B3	1,665.69	B3								
6	New mains	km	2	89 05	B2	50.40	B2	118 24	B2	76.51	B2	75.22	B2								
6a	Total length of new, renewed or relined mains	km	2	374.47		252.72	A2	283.15	A2	181.75	B2	236.51	A2								
6b	Length of new, renewed or relined mains delivered under the watermain rehabilitation programme	km	2	326.41		226.13	A2	222 66	A2	116 92	A2	172.27	A2								
7	Mains abandoned and other changes	km	2	357 29	A2	214.62	A2	208.09	A2	105 51	A2	167.55	A2								
8a	Lead communication pipes replaced as a consequence of water quality sample failures	nr	0			20	B2	15	B2	37	B2	44	B2								
8b	Lead communication pipes replaced as a consequence of customers notifying NI Water that they are replacing their lead supply pipe	nr	0			617	B2	566	B2	703	B2	599	B2								
8c	Opportunistic lead communication pipes replacement undertaken under the watermain rehabilitation programme or during burst service pipe repairs	nr	0			1239	A2	2747	A2	660	B2	1801	A2								
8d	Lead communication pipes replaced under the proactive lead replacement programme	nr	0			0	A1	401	B2	1,922	B2	1,867	A2								
9	Total lead communication pipes replaced	nr	0	1,271	B3	1,876	B3	3,729	B2	3,322	B2	4,311	A2								
10	Communication pipes replaced - other	nr	0	8,566	B3	8,790	B3	7,469	B3	3,915	B3	5,608	B2								
11	Mains bursts per 1000km	nr	0	93	B3	86	B3	85	B3	74	B3	80	B3								
C	**ASSET BALANCE AT MARCH 31**																				
12	Total length of mains	km	2	26,700.79	B3	26,710 55	B3	26,712.44	B3	26,728 83	B3	26,778.15	B3								
D	**DISTRIBUTION STUDIES**																				
13	Cumulative number of distribution zone studies completed	nr	0	71	A1	71	A1	71	A1	71	A1	71	A1								
14	Distribution zone studies ongoing	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1								
15	Total distribution zones identified for study	nr	0	71	A1	71	A1	71	A1	71	A1	71	A1								
16	Cumulative % distribution zone studies completed	%	1	100	A1	100	A1	100	A1	100.0	A1	100 0	A1								
17	Percentage population/properties - completed studies	%	1	100 0	A1	100.0	A1	100 0	A1	100.0	A1	100 0	A1								
E	**WATER QUALITY COMPLIANCE MEASURES**																				
18	% overall compliance with drinking water regulations	%	2	99.77		99.81		99 86		99.83	A2	99.86	A2								
19	% compliance at consumers tap	%	2	99 63		99.74		99.78		99.74	A2	99.77	A2								
20	% iron compliance at consumers tap	%	2	97 25		98.08		98 95		98.40	A2	98.66	A2								
21	% Service Reservoirs with coliforms in >5% samples	%	2	0 00		0.00	A1	0 00	A1	0.00	A1	0.00	A1								
F	**NOMINATED WATER SERVICE OUTPUTS**																				
22	Completion of nominated trunk main schemes	nr	0	2	A1	0	A1	1	A1	2	A1	1	A1								
23	Completion of nominated water treatment works schemes	nr	0	0	A1	0	A1	3	A1	1	A1	0	A1								
24	Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks	nr	0	1	A1	0	A1	1	A1	0	A1	0	A1								
G	**ADDITIONAL WATER SERVICE OUTPUT MEASURES**																				
25	Number of Catchment Management Plans	nr	0			3	A1	5	A1	3	A1	7	A1								
26	Number of school visits	nr	0	138		150		209		277	A1	257	A1								
27	Number of other education events	nr	0	35		38		59		65	A1	64	A1								
28	% Service Reservoirs where sample taps have been assessed and are to required standard	%	1							0.0	A1	0	A1								

Table 11– Water Service Activities

Line 1 – Total length of mains at 1st April 2016

This value has been extracted from AIR16 return.

Lines 2 to 10 - Changes during the reporting year

This document provides the commentary on the following table and lines for NI Water and records the amount of capital and maintenance activity carried out in the report year 16/17 on water mains and communication pipes.

NI Water has achieved 236.51km of total mains activity in this period (No relining carried out in this period). Within the second year of PC15 EP NI Water has achieved 172.27 km against the agreed 16/17 WMRP Monitoring Plan Target of 144km in the Final Determination) of new and renewed and relined mains, under the Water Main Rehab programme. This target for the second year of PC15 has therefore been exceeded. (See Commentary below)

EP has also contributed 1,867No proactive lead replacements by EP under the proactive lead replacement programme. The target for year 2 of PC15 was 1,844 so this target has been exceeded also.

Totals for PC 15 Years 1 and 2

	Length (km) - 2 dp						
	2015-16			2016-17			PC15 Cum (km)
Activity Description	EP	Ops	Total	EP	Ops	Total	
New Mains (WMRP)	12.87	0.00	12.87	11.77	0.00	**11.77**	**24.64**
Renewed Mains (WMRP)	104.05	0.00	104.05	160.50	0.00	**160.5**	**264.55**
Relined Mains (WMRP)	0.00	0.00	**0.00**	0.00	0.00	**0**	**0.00**
Total WMRP Activity	**116.92**	**0.00**	**116.92**	172.27	0.00	172.27	**289.19**
Nominated Trunk Mains (New)	20.32	0.00	**20.32**	7.86	0.00	**7.86**	**28.18**
Nominated Trunk Mains (Renewed)	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**
Total Nominated Trunk Mains Activity	20.32	0.00	**20.32**	7.86	0.00	**7.86**	**28.18**
New Mains - New Development	0.00	42.37	**42.37**	0.00	55.59	**55.59**	**97.96**
Total New Development Activity	0.00	42.37	**42.37**	0.00	55.59	**55.59**	**97.96**
1st Time Services - New	0.95	0.00	**0.95**	0.00	0.00	0.00	**0.95**
1st Time Services - Renewed	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**
Total 1st Time Services	0.95	0.00	**0.95**	0.00	0.00	0.00	**0.95**
Mains Development/Diversions - Renewed	0.00	1.19	**1.19**	0.00	0.79	0.79	**1.98**
Total New Development Activity	0.00	1.19	**1.19**	0.00	0.79	0.79	**1.98**
Total Mains Activity in the Period	**138.19**	**43.56**	**181.75**	**180.13**	**56.38**	**236.51**	**418.26**

PC15 Sub Programme 8 overall mains laying target is 905km over the 6 year period (Although the first year target was reduced to 93km in the Monitoring Plan for PC15 year 1 from an original target in the Final Determination of 130km due to agreement in relation to Budget restrictions). The overall PC 15 target may need to be reviewed in light of Budget changes.

The Target meterage for the six-year PC15 period is 905km (not taking any account any reduced targets for funding restrictions).

Meterage completed to end of year 2 is 172.27km+116.92km = 289.19km, against a target of 93km + 144km = 237km

The mains laid to date 289.19km represents 32% of the original PC 15 overall target of 905km.Looking at a high level analysis therefore NIW is on schedule for the original PC 15 target (i.e. Having passed 2 years of PC 15 out of 6 years indicates NIW should be at 33% complete v the 32% actual progress)

This year's total is 172.27 against a target of 144km.

Further discussion will take place within NIW to review and confirm the PC 15 target length in light of the reduced total for 2015-2016 period.

Strategic Trunk Mains Progress For PC 15 - Year 2

Team	Project No	Project Name	Watermains Renewed (km)	Watermains Relined(km)	Watermains Renewed (km)
WCP2	JB 693	Carland to Cookstown Strategic Trunk Main	0	0	3.13
WCP2	JB 342	Strategic Link Castor Bay to Belfast	0	0	4.73

JB693 Carland – Cookstown Strategic TM

The NIW Water Resources Management Plan 2012 identified that the Central Water Resource Zone (WRZ) will show a deficit of 2 Ml/d in 2015/2016 in the Cookstown area.
The provision of HPPE trunk water main from Carland SR to junction of Sandholes Rd and Strifehill Rd Cookstown with capacity to move 2Ml/day of water to maintain the Supply Demand Balance for the Central Water Resource Area will secure supply to this zone and fulfil the outputs from the Water Resource Strategy.

JR342 Strategic Link Castor Bay – Belfast

The need identified in the Water Resource Strategy (2002 and 2007) and the Draft Water Resource Management Plan 2010 for a Strategic Trunk Main Link from Castor Bay to Lisburn and Belfast.
The resulting Strategic Link pipeline capacity requirement is 56 Ml/d. The scope of works for the preferred option includes new 800/900mm diameter strategic trunk main laid from Castor Bay to South Lisburn; additional storage through the recommissioning of Danescroft SR and St Andrews SR; new water pumping stations at Magherliskmisk SR, Danescroft SR and St Andrews; reinforcement of Gravity II / CTM in North Belfast.

Line 2 - Mains renewed (km)

Line	Description	Units	DP	EP	EP CG	CSD	CSD CG	Total	Overall CG
2	Mains renewed	km	2	160.50	A2	0.79	**B3**	161.29	**A2**

Engineering Procurement

Engineering Procurement (EP) has continued its method of reporting on renewed mains in line 2 to comply with the Regulator's Annual Information Return reporting requirements and definitions manual. Engineering Procurement is the primary contributor to this information. The confidence grade is A2.

CSD Networks Water

Engineering Procurement is the primary contributor to this information but CSD Networks Water has continued to manage some smaller schemes, for example, social housing redevelopments and minor mains diversions or realignments. Confidence Grade: B3

Future Reporting for AIR18 Networks Water will continue to develop the established process for monthly reporting using MWM as a source for base information. The CSD mains renewal work is usually very low volume as is the case here

Overall, Confidence grade is A2 - The overall confidence grade is A2 due to the fact that the EP return is 99.5 % of this return .EP Output in this period is more than 50% greater than 2016-2017.

Line 3 - Mains relined (km)

Line	Description	Units	DP	EP	EP CG	CSD	CSD CG	Total	Overall CG
3	Mains relined	km	2	0.00	**A1**	0.00	**A1**	0.00	**A1**

Engineering Procurement

At present, this operation is not carried out either by Networks Water or by EP. Confidence Grade: A1 as the total is zero.

The PC15 year 2 results for sub-programme 8 showed that no spray lining was carried out To ensure VFM and continuity is achieved, NIW have withheld the issue of spray lining until the award of the new framework. It is anticipated that a WP of spray lining will be issued in 17/18 as the new Framework is now awarded, to test the viability and value of this technique.

CSD Networks Water

The Situation is unlikely to change for AIR18 for Operations Budgets to be utilised for relining of pipework.

Overall Confidence Grade of A1- The return is zero for EP and CSD Networks Water.

There has been no change in the current mains relined figures with that of the 2014-2015 period within PC13 as the outputs have been zero in both cases. EP are continuing to review the value for money and delivery of mains relining.

Line 4 - Mains cleaned (km)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
4	Mains cleaned (total)	km	2	0.00	A1	1 665.69	**B3**	1 665.69	**B3**

Engineering Procurement

This work is carried out by CSD Networks Water; EP has no involvement in this activity.

CSD Networks Water

Detailed data for the reporting period was collated by the Water Business Unit using MWM system reports. As directed by the Regulator, repeat flushing of the same length of main

has been discounted. Work Orders are automatically generated at various frequencies and sent to the Field Operators. This information is captured on the MWM system. The recorded units are the total number of reactive fire hydrant flushing jobs plus the count of flushing MST's active on the Ellipse system, minus those flushing MST's which have not been performed a minimum of once in the report year. This has been converted from units to km using a revised factor of 0.236km per flushing (see methodology for detail).

2016 -2017 information return is made up as follows:
7058 no. flushings x 0.236 km per flush = 1665.69 kms.

This comprises a total count of 6667 no. flushing MST's in Ellipse, minus 17no. flushing MSTs identified as not having been carried out in the report year, plus 408 no. reactive flushing jobs completed.

For AIR17, Maintenance Scheduled tasks (MST's), as part of the planned flushing programme, have continued to be implemented. The programme has been amended from the previous year only in that some frequencies of flushing have been reduced but locations remain generally the same. Some MST's have been removed due to the on-going mains rehabilitation programme and others added as a consequence of repeat customer complaints or water quality sample failures. Confidence Grade: B3.

Although the total no. of reactive flushing jobs (408no.) may contain some repeat flushings, at the same location, these are considered minimal and the Company considers the data collated for this line to be continually improving.

There is a decrease in the completed no. of reactive flushings, which may be due to the continuing improvement in addressing water quality standards and highlighted customer awareness and demand.

As per previous audit recommendations the number of flushing's have been converted to km. The number of flushing's have been captured for April 16 – March 17 year using base information from MWM and then converted to km using the revised factor of 0.236. Within the second year of PC15, there has been increase in mains flushed due to the revised factor.

Future Reporting- For AIR18 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information. The MST flushing programme is under continuous review with the addition and removal of MST's on an on-going basis and adjustments to the frequency of individual MST's. The revised factor of 0.236km per flush is based on a limited sample batch of 150no. flushings and will continue to be added to and revised as necessary throughout AIR18 information gathering. Overall Confidence Grade of B3.

Line 6 - New mains (km)

Line	Description	Units	DP	EP	EP CG	CSD	CSD CG	Total	Overall CG
6	New mains	km	2	19.63	A2	55.59	B2	75.22	B2

Note:
*The EP figure new mains figure of 19.63 km is made up of 11.77 km of New Mains WMRP plus 7.86 km of Strategic Trunk Mains and 0.00 km of first time services.

Engineering Procurement

All EP information is compiled from EP contract management information monthly returns. This is an accurate measurement of the actual lengths of water mains laid, renovated or replaced, compiled from contractor's on-site records. The information is collated from each individual contract on a monthly basis and aggregated into an overall annual figure. EP Confidence grade: A2 This figure is obtained from Monthly Reports in Captrax and aggregated into an annual return.

Future Reporting for AIR18 Networks Water will continue to use the established process monthly reporting using MWM as a source for base information.

CSD Networks Water

Data for the period April 16 – March 17 was collated by Field Managers using system reports, which when checked and confirmed, were transferred onto a spreadsheet managed by the Water Business Unit. This figure primarily includes data for new mains laid in new housing developments throughout the year. CSD Networks Water is the sole contributor for new mains laid in new housing developments. Engineering Procurement is the primary contributor for new mains (replacement upsizing).

For AIR18 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information. Confidence Grade: B2.

The figure from the CSD shows a continued increase from last year's figure due to the continuing improvement in the new housing market and in particular in areas outside the greater Belfast area. Field Managers contributing to this line can more easily monitor lengths of new mains laid due to all of this work being completed solely by a contractor.

Overall Confidence grade: B2 This figure is arrived at by considering that there is a 60:40 split between the contribution of EP and Networks Water .It is reasonable therefore to state that the NW assessment of B2.

Line 6a - Total Length of new, renewed or relined Mains (km)

Line	Description	Units	DP	EP	EP CG	CSD	CSD CG	Total	Overall CG
6a	New renewed or relined mains	Km	2	180.13	A2	56.38	B2	236.51	A2

This is the calculated sum of Lines 2, 3 & 6.

Overall Confidence Grade: A2 as the output is the sum of other lines with similar confidence grades EP delivery is 70% of the total therefore the A2 CG predominates

Line 6b - Length of new, renewed or relined mains delivered under the Water Main Rehabilitation Programme (km)

Line	Description	Units	DP	EP	EP CG	CSD	CSD CG	Total	Overall CG
6b	New renewed or relined mains under WMRP	Km	2	172.27	A2	0.00	A1	172.27	**A2**

Engineering Procurement

EP has continued its method of reporting on new mains in line 6 to comply with the Regulator's Annual Information Return reporting requirements and definitions manual. The confidence grade remains A2 as reporting is from CPMR

CSD Networks Water

Engineering Procurement is the sole contributor to this information. Confidence Grade: A1

Overall Confidence Grade - This is A2 as EP are the only contributors to this line.

Overall Comment - Within the second year of PC15 EP NIW has successfully achieved 172.27 km against the agreed Monitoring Plan Target of 144km

Line 7 - Mains abandoned and other changes (km)

Line	Description	Units	DP	EP	EP CG	CSD	CSD CG	Total	Overall CG
7	Mains abandoned and Other Changes	Km	2	166.76	A2	0.79	B3	167.55	**A2**

Engineering Procurement

The PC15 year 2 results for sub-programme 8 indicated 167.55km mains abandoned which represents 97% of the mains rehabilitated, which is a similar percentage of rehabilitated mains, based on historical data. Confidence Grade is stated as A2.

CSD Networks Water

Data for April 16 – March 17 was collated by Field Managers, confirmed and input onto a spreadsheet managed by the Water Business Unit who collate the data for the annual reporting period. Engineering Procurement is the primary contributor to this information but Networks Water has taken some ownership of smaller schemes, in particular social housing redevelopments and minor mains diversions. Confidence Grade: B3.

Further discussion and guidance will be required for the relevant Field Managers when providing this information.

Future Reporting -For AIR18 Networks Water will continue to develop the established process for monthly reporting using MWM as a source for base information. Confidence Grade is stated as B3.

Overall Confidence Grade is stated as A2 as 99% of the return is from EP who have an A2 Confidence Grade on their data.

Overall Comment -The PC15 year 2 results for sub-programme 8 indicated 97% of the mains rehabilitated have been abandoned, which is a similar percentage of rehabilitated mains based on NIW historical data.

Line 8a - Lead Communication pipes replaced – as a consequence of water quality sample failures (no.)

Line	Description	Units	DP	EP	EP CG	CSD	CSD CG	Total	Overall CG
8a	Lead Communications Pipes replaced as consequence of WQ Sample Failures	Nr	2	0	A1	44	B2	44	B2

Engineering Procurement

CSD Networks Water only supplies this Data. Confidence Grade is A1 as this return is zero.

CSD Networks Water

The CSD Networks Water Business Unit collates information from Customer Field Managers using system reports, which, when checked and confirmed, was input onto a spreadsheet, collated data for the reporting period April 16 – March 17. This is managed by the Water Business Unit, which collates the data for the annual reporting period.

Future Reporting- For AIR18 Networks Water will continue to use the refined definitions for Lead Communication Pipe replacements for monthly reporting using both MWM as a source for base information and Scientific Services records.

Overall Confidence Grade: B2 –The output from Operations BU Team who stated that their data return is B2 Confidence

Comparison to PC 13 year 2 Output – The CSD total is comparable to last year's output The CSD figure has slightly increased from last year's figure but continues to be minimal compared to the figures submitted for Line 8b. The slight CSD increase may be down to heightened customer awareness of water quality standards.

Line 8b - Lead Communication pipes replaced – as a consequence of customers replacing their lead supply pipe (no.)

Line	Description	Units	DP	EP	EP CG	CSD	CSD CG	Total	Overall CG
8b	Lead Communications Pipes replaced as consequence of Customers notifying of supply pipe change	Nr	2	0	A1	599	B2	599	B2

Engineering Procurement

This data is supplied by Networks Water Only. Confidence Grade: A1 as return is zero.

CSD Networks Water

Data for the reporting period April 16 – March 17 was collated from Customer Field Managers using system reports which, when checked, confirmed, and input onto a spreadsheet. Confidence Grade: B2.

Overall Confidence Grade: B2

Comparison to PC 15 year 1 Output - The figure is broadly back in line with that submitted for AIR15. There is no set target for this line.

Line 8c - Lead Communication Pipes replaced – Opportunistic (no.)

Line	Description	Units	DP	EP	EP CG	CSD	CSD CG	Total	Overal l CG
8c	Lead Communications Pipes replaced as consequence of Rehab	Nr	2	1753	A2	48	**B3**	1801	A2

Engineering Procurement

The PC15 year 2 for sub programme 8 results showed 1753nr lead communication pipes replaced as part of opportunistic lead replacement programme. See comment under Line 9 for overview of the recent increase in EP figures against this criterion Confidence Grade: A2.

CSD Networks Water

Data for the reporting period April 16 – March 17 was collated by the Water Business Unit using MWM system reports run on a monthly basis by Field Manager area for selected Standard Jobs. When checked and confirmed the data was input onto a spreadsheet managed by the Business Unit. Confidence Grade: B3.

This figure for CSD is similar to last year .This is a complex issue to analyse some Work Orders to ascertain if a full communication pipe replacement has taken place and if lead was a factor.

Future Reporting for AIR18 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Overall Confidence Grade: A2 due to the 97:3 split in data dominance for this line between EP and Ops.

Line 8d - Lead Communication pipes replaced – Proactive lead replacement programme (no.)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
8d	Lead Communications Pipes replaced under proactive programme	Nr	2	1867	A2	0	A1	1 867	**A2**

Engineering Procurement

The PC15 year 1 sub programme 23 results showed 1867nr lead pipes replaced as a result of the implementation of the proactive lead replacement programme exceeding the PC 15 Year 2 Target of 1844. Confidence Grade: A2.

CSD Networks Water

Networks Water did not have a proactive lead replacement programme in place for the reporting period. Engineering Procurement is the primary contributor to this information. Confidence Grade: A1.

Future Reporting - For AIR18, Networks Water if applicable will continue to use the established process for monthly reporting using MWM as a source for base information.

Overall Confidence Grade: This is assessed as A2 due to the entire return being sourced from EP.

Note - During the second year of PC15, there has been a total of 1,867 total proactive lead communication pipes replaced compared to 1844 target number in PC15 Year 2. The PC 15 target has been exceeded.

Line 9 - Total Lead Communication Pipes Replaced – Sum of 8a, 8b, 8c and 8d (no.)

Line	Description	Units	DP	EP	EP CG	CSD	CSD CG	Total	Overall CG
9	TOTAL Lead Communications Pipes replaced	Nr	2	3620	A2	691	B2	4 311	**A2**

Overall Confidence Grade: Confidence Grade: A2. (This is a line summarising lines above).

Comparison to PC 15 Year 1 Output

The overall total is comparable to PC 15 year 1 but with a significant increase in the Opportunistic Lead replacements done by EP. (This can be attributed to the higher proportion of urban works carried out in the period i.e. 58% rural v 42% urban against an overall PC percentage of 67% rural and 33% urban. The proactive lead replacement services programme reduced in this period from the previous year but achieved the target

Line 10 - Communication pipes replaced – other (no.)

Number of communication pipes (all types of materials but excluding lead) replaced for other reasons e.g. at the customer's request

Line	Description	Units	DP	EP	EP CG	CSD	CSD CG	Total	Overall CG
10	Communications Pipes replaced (other)	Nr	2	4,419	A2	1,189	**B3**	5,608	B2

Engineering Procurement

This shows an increase in EP numbers by approx. 50% from last year the increase can be attributed to the higher proportion of urban mains laying works carried out in year 2. 58% rural and 42% urban against the overall PC15 target split of 67% rural and 33% urban. (Doubled). **Confidence Grade**: A2.

CSD Networks Water

Data for the reporting period April 16 – March 17 was collated by the Water Business Unit using MWM system reports run on a monthly basis by Field Manager area for selected Standard Jobs. When checked and confirmed, the data was input onto a spreadsheet managed by the Business Unit. Confidence Grade: B3. This figure is broadly in line with figures for last year as detailed analysis of MWM reports and individual Work Orders continues. It remains problematic when analysing some Work Orders whether or not a full communication pipe replacement has been carried out or only a localised burst service repair completed.

Future Reporting- For AIR18 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Overall Confidence Grade: of B2

This return shows an increase in EP numbers for this line by approx. 50% from last year. The increase can be attributed to the higher proportion of urban mains laying works carried

out in year 2 by EP i.e. 58% rural and 42% urban against the overall PC15 target split of 67% rural and 33% urban.

Line 11 - Mains bursts per 1,000km

The specified unit for Line 11 is Mains Bursts per 1,000km. NIW do not currently record Mains Bursts per 1000km but record the actual number of Mains Bursts Repairs carried out. Detailed data for the reporting period April 16 – March 17 was collated using MWM system reports which when checked and confirmed were transferred onto a summary spreadsheet. A number of repairs attributable to third party damage have also been extracted from the final total. The total no. of mains bursts repairs for Networks Water was then converted to bursts per 1,000km.

Calculation of Mains Bursts per 1,000km

Total Burst Mains divided by Total length of mains multiplied by 1,000

2196 – 61 (rechargeables) / 26,778.15km = 0.0797 x 1,000 = 79.73

Total Bursts per 1,000km = 79.7

2014 information return was 2,382 (Inc. 83no. rechargeables)
2015 information return was 2,348 (inc. 82no. rechargeables)
2016 information return was 2,051 (inc. 79no. rechargeables)

Proportion of bursts within line 11 detected by proactive methods

The total number of Mains Repairs carried out by NIW was 2196 (including 61no. due to third party damage).

The number of mains repairs carried out by Networks Water function due to non-proactive leakage detection methods was 1313.

The number of mains repairs carried out due to proactive leakage detection methods was 883.

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Confidence Grade B3

The number of bursts for Networks Water has been captured for the complete year using base information on a monthly basis from MWM reporting systems. Individual Work Orders have been analysed and duplicates and non-mains repairs extracted. This year's figure has increased slightly from AIR 16 but the following comments continue to be a factor:

- Mains rehabilitation schemes continue to have a positive impact in reducing the no. of defects with older iron mains being replaced
- Pressure Management Schemes in targeted areas including new installations, replacements and relocations of pressure reducing / sustaining valves.
- Continuing detail has been paid to the classification of mains repairs as opposed to communication pipe repairs or replacements.

There is a significant increase in the figure for the month of November compared to AIR 16. During November 2016, there were two periods of negative temperature followed by sharp increases in temperature. This resulted in elevated burst numbers through both proactive leakage detection and those reported by customers. The winter period, on the whole, was again relatively mild.

Future Reporting

For AIR18 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Line 12 - Total length of mains 31st March 2017

This figure has been extracted from the Corporate Asset Register. There has been no change to the structure of the data reported on this year from the previous years that would directly affect the total provided. The confidence grade of the data will remain the same as the previous year. There have been no significant improvements in data quality since the AIR16 reports. Any new data will have adhered to the NIW Code of Practice for the submission of asset data ensuring that data quality levels have been maintained throughout the year.

As per the reporters recommendation during the AIR14 audit this figure includes trunk mains that are marked as "Out of Service" on the Corporate Asset Register. This recommendation was made as although these mains are currently out of service they are not abandoned and could potentially come back into service in the future.

Lines 13 to 17- Distribution studies

Lines 13 to 17 reflect the reporting requirements for the Zonal Study Methodology that has traditionally been employed by NIW to highlight and prioritise investment in the Water Network. This methodology involved, identifying Zones which were then: intensively examined, hydraulically modelled, site checked and discussed in detail with NIW Managers. The output of this exercise was a prioritised list of Network Rehabilitation and Rationalisation schemes. All Zonal Studies have been addressed and completed over the 13 years or so prior to 2014, and therefore all of NIW Zones had been addressed by the Rehabilitation/Zonal Study Process (as shown in the table below). The Confidence Grade therefore of this return is A1.

Line 13 – Cumulative number of distribution zone studies completed

Zonal Studies Start & Completion Dates (31 March 2013)				**1st Update of Initial Study**	
Zone	**AIR13 Population**	**Start Date**	**Completion Date**	**Start Date**	**Completion Date**
Craigavon West	21846	11/11/99	Aug-01	Jun-13	Nov-13
B'mena Borough	28556	20/04/00	Dec-02	Jun-13	Nov-13
Silent Valley	3507	16/07/01	Jan-Mar 2004		
Fofanny Newry	52045	16/07/01	Jan-Mar 2004		
Camlough	14817	10/10/01	Jan-Mar 2004		
Ballinrees West	17042	07/01/02	Apr-Jun 2003		
Breda South	38505	20/03/01	Oct-02	Jun-13	Nov-13
Cityside	58451	09/08/00	Oct-04		
Castor Bay/Armagh	16316	18/12/02	Feb-06		
Seagahan	32194	18/12/02	Feb-06		
Clay Lake	6792	18/12/02	Feb-06		
Ards North	28219	24/06/03	Nov-05		
Lough Cowey	9665	24/06/03	Nov-05		
Bangor Outer	44505	24/06/03	Nov-05		
Castor Bay/M'liskmisk	16760	19/11/03	Nov-05	Jun-13	Nov-13
Altnahinch	31441	04/06/01	Feb-03		
Drumabest	13465	05/06/01	Feb-03		

Zone	AIR13 Population	Start Date	Completion Date	Start Date	Completion Date
Ballinrees East	23269	07/01/02	Apr-Jun 2003		
Ballinrees Central	26032	07/01/02	Apr-Jun 2003		
Dungonnell	37576	30/05/01	Jan-05	Jun-13	Nov-13
North Tyrone	30143	10/05/01	May-Jun 2006		
South West	13682	10/05/01	May-Jun 2006		
Tardree	10655	04/09/03	Mar-09		
Dunore West	44515	04/09/03	Mar-09		
Lough Fea	30138	23/04/01	Dec-07		
Castlereagh	26103	19/05/02	Nov-07		
Purdysburn East	32159	19/05/02	Nov-07		
Castor Bay Shanmoy	22278	12/11/02	Dec-09		
Altmore/Gortlenaghan	11639	12/11/02	Dec-09		
Newtownards Town	32722	02/11/04	Dec-07		
Ballintemple	15670	02/07/02	Apr-09		
Lough Ross	10568	02/07/02	Apr-09		
Fofanny B'bridge	19348	05/04/01	Dec-07	Jun-13	Nov-13
Castor Bay/Banbridge	30596	05/04/01	Dec-07	Jun-13	Nov-13
Carmoney East	16730	04/07/01	Mar-08		
Waterside	25698	04/07/01	Mar-08		
Moyola	40982	01/10/01	Aug-09		
Lisburn Town	41397	29/04/03	Jan-08		
Lisburn Rural	10417	29/04/03	Jan-08		
Mid Down	29651	02/11/04	Feb-09		
Ballygowan	6473	02/11/04	Feb-09		
Comber	13139	02/11/04	Feb-09		
Craigavon North	35794	19/11/03	Feb-08	Jun-13	Nov-13
Craigavon South	21221	19/11/03	Feb-08	Jun-13	Nov-13
Limavady	31204	19/05/04	Sep-08		
North East	4249	19/05/04	Sep-08		
South	20995	06/01/08	Mar-13		
South East	14339	06/01/08	Mar-13		
N Down/Bangor	31951	01/04/06	Jan-08		
South Down	15886	15/06/07	Mar-09		
Downpatrick	8433	15/06/07	Mar-09		
Newcastle	10263	15/06/07	Mar-09		
Mourne Coastal	12574	15/06/07	Mar-09		
Breda North	54099	22/02/08	Oct-09		
Belfast East	37673	22/02/08	Oct-09		
Holywood	8444	22/02/08	Oct-09		
Dunmurry	35299	Jul-08	Feb-12		
Lisburn South Rural	20560	Jul-08	Feb-12		
Ballywonard/Dunanney	39462	Jun-08	Jun-10		
Ballysillan/Ballyaghagan	34176	Jun-08	Jun-10		
West Belfast rural	10338	Jun-08	Jun-10		
Omagh	39559	Jul-08	Mar-13		
Dunore East	21011	Jun-09	Mar-12		
Killylane	32895	Jun-09	Mar-12		
Lough Mourne	7681	05/02/09	Sep-10		
Carrickfergus	38463	05/02/09	Sep-10		
Newtownabbey	35197	05/02/09	Sep-10		
Whiterock	33109	Jun-09	Jun-12		
B'gomartin/P'burn West	34055	Jun-09	Jun-12		

Zone	AIR13 Population	Start Date	Completion Date	Start Date	Completion Date
Oldpark	65046	Jun-09	Jun-12		
Ballygomartin North	29788	Jun-09	Jun-12		

KEY	
Started/finished	71
Started/ongoing	0
Programmed to start	0
Remaining zones to start	0

Studies completed population	1819470
N Ireland population	1819470
Percentage Complete	100.0%

The implications for Lines 13 to 17 are that, the specific question in relation to Zonal Study completion should probably be changed in the future to reflect progress in the new WIIM methodology.

WIIM Work Packages Overview 2015-2016

The Zonal Study methodology has now been superseded by the Water mains Infrastructure Investment Model (WIIM) Methodology. This methodology relies on current Corporate asset data to build up a picture of prioritised needs which is then checked hydraulically against a model and the output reviewed by NIW Managers and Field Staff.

The WIIM (Water Infrastructure Investment Model) methodology involves taking all appropriate NIW asset datasets, which reflect the performance of the network (also including Customer data), and applying a scoring matrix to reflect these datasets for all distribution pipelines in NIW. These scores are then applied to each pipeline .The highest scoring model areas are then examined for prioritised and appropriate intervention depending on the drivers for each pipeline

The 71 Model areas have now been combined into 54 proposed model areas reflecting the current Water Resource areas.

During this period two phases of prioritised interventions were commenced under the WIIM methodology, with the following WPs being issued in 2016 -2017 (See table below)

Water Networks Rehab Work Packages passed to Delivery Team in 2016-2017 by the AP Networks Water Team

WPs WIIM 1.2	Month Completed	Year Completed	Cost £
Althaninch Bushmills 1	April	2016	1.7M
Althaninch Bushmills 2	April	2016	2.0M
Ballinrees Limavady 1	April	2016	2.2M
Ballinrees Limavady 2	April	2016	1.2M
Carran Hill Crossmaglen	April	2016	2.5M
Clay Lake Keady	April	2016	2.5M
Dunore BGO North	April	2016	1.3M
Dunore East	April	2016	2.4M
Dunore Point	April	2016	2.2M
Lough Braden	April	2016	2.4M
Lough Fea	April	2016	2.3M

WPs WIIM 1.2	Month Completed	Year Completed	Cost £
Loughmacrory	April	2016	2.0M
Moyola	April	2016	2.2M
TOTAL			**£27M**

WPs WIIM 2.1	Month Completed	Year Completed	Cost £
Antrim North	November	2016	2.2M
Antrim South	November	2016	1.3M
Banbridge South Armagh	November	2016	1.8M
Craigavon	November	2016	2.6M
Fermanagh North	November	2016	2.8M
Fermanagh South	November	2016	2.1M
Lurgan Moira	November	2016	2.6M
Tyrone North	November	2016	2.4M
Tyrone South	November	2016	2.4M
Tyrone West	November	2016	2.1M
Antrim Ballyclare	March	2017	2.3M
Lisburn	March	2017	2.4M
Newtownards	March	2017	2.2M
TOTAL			**29.2M**

Hydraulic Model Rebuilds Arising Out of WIIM Analysis

Hydraulic Model rebuilds are now identified by looking forward into the following years WIIM priority areas and making a judgement as to whether the model in this area is adequate to allow accurate Verification of the WIIM Desktop priority schemes. If the model quality is considered to be inadequate for purpose (due to the passage of time and the fact that the area has been extensively rehabilitated since the model was original y built)then the model area is prioritised for re-build so that the WIIM Work package can be carried out in the following year.

Hydraulic Model Rebuilds Completed in 2016-2017

Hydraulic Models Rebuilds Completed in 2016-2017	**Month Completed**	**Year Completed**	**Numbers of Properties**
Drumaroad Ards Carryduff	**May**	**2016**	10,100
Purdysburn	**June**	**2016**	41,500
Carran Hill Clay Lake	**June**	**2016**	10,000
Castor Bay Dungannon	**March**	**2017**	27,100
Carrickfergus	**March**	**2017**	36,000
Foffany South	**Completed in May**	2017	26,200
Drumaroad Ards	**March**	**2017**	23,800
Drumaroad Bangor	**March**	**2017**	34,200
Seagahan Armagh	**Completed in May**	2017	15,200

Summary of current model ages showing the number of properties per model area (Note: a heat map is currently available on request showing the overview of updated modelled areas from most recent to oldest)

Model Number	Model Code	Model Name	Number of Properties Supplied	Model Calibration Date
1	BTPK	Belfast Oldpark	151,046	2009
2	FBDY	Forked Bridge Dunmurry	24,150	2010
3	DBNS	Dunore Ballygomartin South	104,030	2009
4	DDAP	Drumaroad Ards Peninsula	11,382	2016
5	DDAC	Drumaroad Ards Carryduff	10,081	2016
6	DDBH	Drumaroad Ballynahinch	17,183	2006
7	LSRL	Lisburn South Rural	6,053	2010
8	RNID	Rathlin Island	115	N/A
9	DPBE	Dunore Point Ballymena East	1,979	2005
10	BASH	Breda South	24,673	2014
11	AHBS	Altnahinch Bushmills	13,121	2015
12	DELL	Dungonnell	15,729	2013
13	KENH	Killylane CWB North	2,735	2005
14	KESH	Killylane CWB South	17,435	2010
15	DPAM	Dunore Point Antrim	25,803	2015
16	DEET	Dunore East	2,086	2010
17	CGUS	Carrickfergus	35,961	2009
18	BWON	Ballywonard	13,681	2009
19	FBSD	Forked Bridge Stoneyford	10,561	2005
20	CBLN	Castor Bay Lurgan	11,538	2014
21	DDAN	Drumaroad Ards Newtownards Town	13,475	2016
22	DDBR	Drumaroad Bangor	34,241	2016
23	DDLU	Drumaroad Lisburn - Urban	13,482	2015
24	PBUR	Purdysburn	41,541	2016
25	DDDK	Drumaroad Downpatrick	17,342	2008
26	FOSH	Foffany South	26,236	2016
27	CBNH	Castor Bay North	50,676	2013
28	FONH	Foffany North	15,003	2013
29	DBNN	Dunore Ballygomartin North	18,947	2009
30	DBNH	Dunore Belfast North	19,962	2017
31	CYEN	Carmoney Eglinton	18,909	2001
32	CHNW	Camlough Newry West	10,932	2004
33	CHCN	Carran Hill Crossmaglen	5,994	2016
34	CLKY	Clay Lake Keady	3,997	2016
35	LMBH	Lough Macrory Beragh	4,652	2010
36	MAUM	Moyola Unagh Mormeal	2,644	2015
37	CYDY	Corrody Derry	27,236	2004
38	BSLY	Ballinrees Limavady	8,654	2006
40	LFEA	Lough Fea	15,917	2015
41	SNAH	Seagahan Armagh	15,211	2016
42	CBDG	Castor Bay Dungannon	27,136	2016

Model Number	Model Code	Model Name	Number of Properties Supplied	Model Calibration Date
43	KNEN	Killyhevlin / Enniskillen	34,448	2008
44	BKGN	Belleek Garrison	2,122	2008
45	LBDN	Lough Bradan Drumquin	9,976	2015
46	LMKC	Lough Macrory Killyclogher Omagh	14,615	2010
47	DGSE	Derg Strabane	16,508	2002
48	MAMT	Moyola Magherafelt	18,083	2015
49	CHDN	Caugh Hill Dungiven	6,467	2006
50	BSCE	Ballinrees Coleraine	39,568	2002
51	CBTE	Castor Bay Tandragee	5,693	2004
52	DBSH	Dunore Breda North	18,163	2009
53	BMEN	Ballymena	13,939	2013
54	DDLC	Drumaroad Lisburn - Castlereagh	11,947	2004

Line 18 - % Overall compliance with drinking water regulations

NI Water is assessed for its overall performance by % Overall Compliance at customer tap, WTWs, SRs, and Authorised Supply Points. Under this measurement method, there has been a plateauing in compliance over the last number of years, against a Utility Regulator specified target of 99.79%. Please note that water supplied from PPP assets is included in the compliance assessment.

Reporting Year	2010	2011	2012	2013	2014	2015	2016
% Overall Compliance	99.87%	99.84%	99.77%	99.81%	99.86%	99.83%	99.86%

Line 19 - % Compliance at consumers tap (including supply points)

NI Water is assessed for its overall performance by % Compliance at customer tap including authorised supply points.

Reporting Year	2010	2011	2012	2013	2014	2015	2016
% Compliance at consumer tap (including supply points)	99.81%	99.73%	99.63%	99.74%	99.78%	99.74%	99.77%

Line 20 - % Iron compliance at consumers tap

Reporting Year	2010	2011	2012	2013	2014	2015	2016
% Iron compliance at consumer tap	97.98%	98.27%	97.25%	98.08%	98.95%	98.40%	98.66%

Line 21 - % Service reservoirs with coliforms in >5% samples

NI Water has continued to report 0 for this metric, having had 0 service reservoirs with >5% exceedances over the last number of years. There is an ongoing service reservoir cleaning programme to maintain this.

For 2016 all PC15 targets were met.

Line 22 - Completion of nominated trunk main schemes

One trunk mains scheme identified in the PC15 Programme achieved Beneficial Use in Year 2 (2016/17) of the programme.

JB693	Carland to Cookstown Trunkmain	Achieved beneficial use in 2016/17

The confidence for this line was assessed as A1: this is based on review of CPMR approvals and financial details contained within CPMR.

Line 23 - Completion of nominated water treatment works schemes

No Water Treatment Works scheme identified in the PC15 Programme achieved Beneficial Use in Year 2 (2016/17).

The confidence grade for this line was determined using the reporting guidance and was assessed as A1 following review of CPMR approvals and financial details contained within CPMR.

Line 24 - Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks

No projects of this type were profiled to achieve Beneficial Use in 2016/17.

The confidence was assessed as A1 following review of CPMR approvals and financial details contained within CPMR.

Line 25 - Number of Catchment Management Plans

Water Treatment Work Name	Catchment Management Study	Target Delivery Date
Killylane	2013/14	31/03/2014
Dorisland	2013/14	31/03/2014
Clay Lake	2013/14	31/03/2014
Derg (Inc Strule)	2014/15	31/03/2015
Lough Braden	2014/15	31/03/2015
Caugh Hill	2014/15	31/03/2015
Carmoney	2014/15	31/03/2015
Seagahan	2014/15	31/03/2015
Altnahinch	2015/16	31/03/2016
Drumaroad (inc Silent Valley, Annalong & Lough Island Reavey)	2015/16	31/03/2016
Fofanny	2015/16	31/03/2016
Dunore Point	2016/17	31/03/2017
Castor Bay	2016/17	31/03/2017
Moyola	2016/17	31/03/2017
Ballinrees	2016/17	31/03/2017
Lough Macrory	2016/17	31/03/2017
Lough Fea	2016/17	31/03/2017
Glenhordial	2016/17	31/03/2017
Carron Hill	2017/18	31/03/2018
Rathlin	2017/18	31/03/2018
Dungonnell	2017/18	31/03/2018
Killyhevlin	2018/19	31/12/2018
Belleek	2018/19	31/12/2018

PC15 outputs have all been met to date and are on target for the remainder of the PC15 period.

Line 26 - Number of school visits

There were 257 Schools visited during this reporting period.

Line 27 - Number of other education events

There were 64 other education events attended during this reporting period.

Line 28 - % Service Reservoirs where sample taps have been assessed and are to required standard

No sample taps were installed in this reporting period. The sample tap contract was awarded in 16/17; however, approval was required on the design before manufacture of sample tap points could commence. Commencement is due within the 17/18 period with the full delivery of 100% expected within PC15. The proposed completion profile is now 70% completed in 2017-2018 and 30% in 2018-2019.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS - (NIW Only)

	DESCRIPTION	UNITS	DP	1 NR OF SOURCES	2 PROP'N DIST INPUT	3 BULK PROP'N OF D.I.	4 REPORT YEAR	CG
				UNITS / DP	UNITS / DP	UNITS / DP		
				nr / 0	Prop'n (0-1) / 3	Prop'n (0-1) / 3		
A	**SOURCE TYPES AND PUMPING**							
1	Impounding reservoirs			22	0.762	0.000		B2
2	River abstractions			9	0.238	0.000		B2
3	Boreholes			1	0.000	0.000		B2
4	Source types and pumping; total			32	1.000	0.000		B2
5	Average pumping head - total	m.hd	1				88.3	B4

		TOTAL PROP'N OF D.I.	TOTAL NR OF WORKS
		UNITS / DP	UNITS / DP
		Prop'n (0-1) / 3	nr / 0
B	**TREATMENT TYPE**		
6	Proportion of distribution input - simple disinfection	0.000	1
7	Proportion of distribution input - W1	0.000	0
8	Proportion of distribution input - W2	0.000	0
9	Proportion of distribution input - W3	0.518	8
10	Proportion of distribution input - W4	0.482	10
11	Proportion of distribution input - total	1.000	
12	Total numbers of works		19

				BAND 1 <= 165mm	BAND 2 166 - 320mm	BAND 3 321 - 625mm	BAND 4 > 625mm
C	**POTABLE MAINS**						
13	Potable mains (nominal bore)	km	2	21,026.01	4,124.36	1,357.90	269.88

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS (PPP Only)

	DESCRIPTION	UNITS	DP	1 NR OF SOURCES	2 PROP'N DIST INPUT	3 BULK PROP'N OF D.I.	4 REPORT YEAR	CG
				UNITS / DP	UNITS / DP	UNITS / DP		
A	SOURCE TYPES AND PUMPING			nr / 0	Prop'n (0-1) / 3	Prop'n (0-1) / 3		
1	Impounding reservoirs			2	0.045	0.000		B2
2	River abstractions			4	0.955	0.000		B2
3	Boreholes			0	0.000	0.000		A1
4	Source types and pumping; total			6	1.000	0.000		B2
5	Average pumping head - total	m.hd	1				157.3	B2

	B TREATMENT TYPE	TOTAL PROP'N OF D.I. UNITS / DP	TOTAL NR OF WORKS UNITS / DP
		Prop'n (0-1) / 3	nr / 0
6	Proportion of distribution input - simple disinfection	0.000	0
7	Proportion of distribution input - W1	0.000	0
8	Proportion of distribution input - W2	0.000	0
9	Proportion of distribution input - W3	0.000	0
10	Proportion of distribution input - W4	1.000	4
11	Proportion of distribution input - total	1.000	
12	Total numbers of works		4

	C POTABLE MAINS			BAND 1 <= 165mm	BAND 2 166 - 320mm	BAND 3 321 - 625mm	BAND 4 > 625mm
13	Potable mains (nominal bore)	km	2	0.00	0.00	16.42	0.00

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS - (Total)

	DESCRIPTION	UNITS	DP	1 NR OF SOURCES	2 PROP'N DIST INPUT	3 BULK PROP'N OF D.I.	4 REPORT YEAR	CG
				UNITS / DP	UNITS / DP	UNITS / DP		
				nr / 0	Prop'n (0-1) / 3	Prop'n (0-1) / 3		
A	**SOURCE TYPES AND PUMPING**							
1	Impounding reservoirs			24	0.437	0.000		B2
2	River abstractions			13	0.563	0.000		B2
3	Boreholes			1	0.000	0.000		B2
4	Source types and pumping; total			38	1.000	0.000		B2
5	Average pumping head - total	m.hd	1				119.6	B4

		TOTAL PROP'N OF D.I.	TOTAL NR OF WORKS
		UNITS / DP	UNITS / DP
		Prop'n (0-1) / 3	nr / 0
B	**TREATMENT TYPE**		
6	Proportion of distribution input - simple disinfection	0.000	1
7	Proportion of distribution input - W1	0.000	0
8	Proportion of distribution input - W2	0.000	0
9	Proportion of distribution input - W3	0.283	8
10	Proportion of distribution input - W4	0.717	14
11	Proportion of distribution input - total	1.000	
12	Total numbers of works		23

				BAND 1 <= 165mm	BAND 2 166 - 320mm	BAND 3 321 - 625mm	BAND 4 > 625mm
C	**POTABLE MAINS**						
13	Potable mains (nominal bore)	km	2	21,026.01	4,124.36	1,374.32	269.88

Table 12 – Water Explanatory Factors

Water sources & treatment types – NI Water only

Changes to Sources since AIR16

NI Water (Only) had the following 32 sources in service for part or all of AIR17, including in total: - boreholes (1nr), impounding reservoirs (22 nr), and rivers & loughs (9 nr). The rivers and loughs number has increased by 1, since AIR16, due to the introduction of the River Strule as a river source as it feeds directly into the inlet of Derg WTWs. Although Camlough Lake had not been included in the source figure for 31st March 2016, it had been included within the source total for AIR16. Hence, there is no net change in the total number of sources from AIR16 to AIR17.

Changes to treatment types since AIR16

The treatment type totals in service for part or all of AIR17, have changed by 1 since AIR16, and include - simple disinfection (1 nr), W1 (0 nr), W2 (0 nr), W3 (8 nr) & W4 (10 nr). The W4 number has decreased by 1 as the last day of production of Camlough WTW was 30th March 2016.

Changes to proportional distribution input since AIR16

The proportional distribution input from Impounding Reservoirs has decreased across the board for 'NIW only', 'PPP only' and 'total' from AIR16 to AIR17. The increase can be attributed mainly to drought contingency measures put in place from October 2016 to March 2017 to conserve and restore impounding reservoir levels, due to the dry winter, with the increased dependency on Lough Neagh.

The following table shows changes that have occurred with reference to source types and treatment types since AIR16.

Location	AIR17 Source Type	Treatment Type	WTWs In Service during AIR 17	Sources In Service at 31st Mar 2016	Sources In Service at 31st Mar 2017
Rathlin	Borehole	SD	Yes	Yes	Yes
Killylane	Imp. Reservoir	W3	Yes	Yes	Yes
Dungonnell	Imp. Reservoir	W3	Yes	Yes	Yes
Altnahinch	Imp. Reservoir	W3	Yes	Yes	Yes
Lough Fea	Imp. Reservoir (listed as a Lough for AIR15 – classified as IR in June 2015)	W3	Yes	Yes	Yes
Drumaroad	2No Imp. Reservoirs (Ben Crom IR & Silent Valley IR)	W3	Yes	Yes - 2No. sources	Yes - 2No. sources
Caugh Hill	Imp. Reservoir - Altnaheglish IR & River (Glenedra)	W3	Yes	Yes – 2No. sources	Yes – 2No. sources
Glenhordial	Imp. Reservoir	W3	Yes	Yes	Yes

Location	AIR17 Source Type	Treatment Type	WTWs In Service during AIR 17	Sources In Service at 31st Mar 2016	Sources In Service at 31st Mar 2017
Lough Bradan	2 No - Lough Bradan Imp. Reservoir, and Lough Lee	W4	Yes	Yes - 2No sources	Yes - 2No sources
Dorisland	7No Imp. Reservoirs – (Dorisland IR, Lough Mourne IR, Copeland IR, Lower South Woodburn IR, Upper South Woodburn IR, Middle South Woodburn IR and North Woodburn IR)	W4	Yes	Yes - 7No. sources	Yes - 7No. sources
Lough Macrory	1No Imp. Reservoir & 1No Lough (Lough Fingrean IR & Lough Macrory-Lough	W4	Yes	Yes - 2No. sources	Yes - 2No. sources
Clay Lake	Imp. Reservoir	W4	Yes	Yes	Yes
Fofanny	3No Imp. Reservoir (Lough Island Reavey, Fofanny, Spelga)	W4	Yes	Yes – 3No. sources	Yes – 3No. sources
Seagahan	Imp. Reservoir	W4	Yes	Yes	Yes
Camlough	Lough – No longer used since 30/3/16	N/A	No	No	No – Last day of production at Camlough WTW was 30/3/16
Killyhevlin	Lough	W4	Yes	Yes	Yes
Carran Hill	Lough	W4	Yes	Yes	Yes
Belleek	Lough	W3	Yes	Yes	Yes
Carmoney	River	W4	Yes	Yes	Yes

Location	AIR17 Source Type	Treatment Type	WTWs In Service during AIR 17	Sources In Service at 31st Mar 2016	Sources In Service at 31st Mar 2017
Derg	River	W4	Yes	Yes – River Derg only	Yes– 2No sources (River Strule introduced April 2016, and River Derg)
		Total	**19**	**31**	**32**

1. Caugh Hill WTW

Caugh Hill WTWs is fed directly and independently by 2 sources Altnaheglish IR and Glenadra River. The works can also be fed by Cairnsburn River, but this has only been used in drought events and has not been used since 1995. Telemetry information for 16/17 indicates that 26.93% of the raw water into the WTWs came from Glenedra River during the AIR17 period. The Distribution Input for Caugh Hill has therefore been split in the ratio of 73:27 between the IR and the River, for the computation of the proportional distribution input for Lines 1 to 3. The AIR17 draw off from Glenedra River is higher than that for AIR16 as maintenance work was being carried out at the river intake, during AIR16, and hence was out of service for a period.

The draw off from Glenedra River is based on quantity & quality available. When the river is in normal condition, the inlet valve is open fully to take as much water as possible from this source. However, when there is a flood or a period of inclement weather & the water quality takes a turn for the worse the inlet valve is throttled back to reduce the inlet from this source. The normal percentage draw off is difficult to estimate as the raw water quality changes frequently and the NI Water throughput has been reduced significantly over the years with the introduction of the Balinrees source. With water quality issues of two years ago Glenedra intake was reduced, as the colour instrument on which the valve control was based proved unreliable and the percentage draw off would be down on normal. Based on the figures over the years the Glenedra flow could be as high as 10-30 % of the plant throughput.

2. Fofanny WTWs

Fofanny WTWs is fed directly and independently by 3 sources Lough Island Reavey IR, Spelga IR and Fofanny IR. NIW is listing these three sources for Fofanny WTWs, for AIR17.

3. Lough Bradan WTWs

Lough Bradan WTWs is fed directly by Lough Lee (lough) and Lough Bradan Impounding Reservoir. Lough Lee is therefore being reported as a source. For AIR17 57.66% of the total WTWs' raw water comes from Lough Lee and enters into the pipework between Lough Braden IR and the WTWs. Any extra coming from Lough Lee would backup into Lough Bradan IR and would vary depending on rainfall amounts.

From telemetry info obtained for AIR17, 57.66% of the raw water comes from Lough Lee and 42.34% from Lough Bradan IR.

4. Camlough WTWs

Camlough WTWs was in operation for the full 12 months of AIR16, but was taken out of service on 31/3/16, with the last day of production on 30/3/16. The new Castor Bay to Newry Trunk Main was laid to enable the abandonment of Camlough WTWs. Hence, the Castor Bay supply area had been extended to cover the catchment previously supplied by Camlough WTW. Hence, Camlough WTWs and Camlough Lake do not feature in the AIR17 figures respectively for treatment types and water sources.

5. Lough Fea WTWs

Lough Fea WTWs is fed by Lough Fea, which is classified as an Impounding Reservoir.

6. Lough Macrory WTWs

Lough Macrory WTWs is fed directly by Lough Macrory (lough). Lough Fingrean IR overflows naturally into Lough Macrory, with the water being pumped on to the WTWs. Approximately 90% of the water in Lough Macrory originates from Fingrean IR. As in AIR16, NIW is listing Lough Macrory and Fingrean IR as two sources for Lough Macrory WTWs for AIR17.

7. Belleek & Killyhevlin WTWs

Although both Belleek WTWs and Killyhevlin WTWs are supplied by the same source i.e. Lough Erne, NI Water is counting Lough Erne as a source for each of the works, due to its size, in line with the approach to Lough Neagh as depicted in the NIAUR AIR13 Chapter 12 guidance.

During AIR 16, GAC was primarily introduced to the process to address increasing MCPA levels (as per Dorisland WTW) but also to address taste and odour problems.

8. Drumaroad WTW

Drumaroad WTWs is fed directly by Silent Valley IR. It can receive occasional supply from Lough Island Reavey IR, to compensate Silent Valley water during operational maintenance. However, this IR is not being reported against Drumaroad as it is reported against Fofanny WTWs. Silent Valley is supplied by Ben Crom IR. Silent Valley IR and Ben Crom IR collect raw water from the Mourne Mountains' catchment area. NIW is listing Silent Valley IR and Ben Crom IR as two sources for Drumaroad WTWs.

9. Dorisland WTWs

Dorisland WTWs is fed directly by Dorisland IR. However, Dorisland IR is fed through a system of 6 IRs namely, Lough Mourne IR, Copeland IR, Lower South Woodburn IR, Upper South Woodburn IR, Middle South Woodburn IR and North Woodburn IR.

The above consists of six man made dams and one natural lake (Lough Mourne). Raw water from all dams can be mixed in many different combinations depending on storage and water quality. NI Water tries to maintain the top water level in each IR by controlling inlet and outlet valves. The Woodburn IRs can be used all year round. However, Lough Mourne and Copeland IRs are used only in winter months due to problems with algae. These IRs are important to NI Water from the point of view that they can be individually isolated and water diverted to waste, in the event of a pollution incident.

For AIR16 the Treatment Type was changed to W4 due to the introduction of GAC Filtration.

Over the years, there has been a growing issue with MCPA exceedances, which is a herbicide, used mainly to control rushes. The existing process included the dosing of Powder Activated Carbon but as the loading of the MCPA in the raw water has seemingly increased over the last couple of years the PAC did not have the ability to remove enough and a number of exceedances occurred. It was decided to install GAC Filtration in order to comply with current water quality parameters". GAC filtration has been in full operation since April 2015.

10. Derg WTWs

The main source for Derg WTWs has been the River Derg. The River Strule has also been feeding the works from April 2016, contributing approximately 21% of the raw water, which is pumped to the Derg WTWs Inlet, during AIR17. NIW is listing River Strule and River Derg as two sources for Derg WTWs, for AIR17, as the works receives water directly from the two sources.

11. Dungonnell WTWs

The OSEC plant has been taken out of service and temporary hypo dosing commenced on 27th March 2017. A base maintenance project to remove the OSEC plant and install bulk hypo tanks is planned for 2017/18 delivery. There is no change to the treatment type.

12. Altnahinch WTWs

The OSEC plant has been taken out of service and temporary hypo dosing commenced on 14th November 2016. A base maintenance project to remove the OSEC plant and install bulk hypo tanks is presently progressing. There is no change to the treatment type.

Capacities of NIW's impounding reservoirs (22No)

The table below depicts the capacities of the 22 NIW Only Impounding Reservoirs, which were in service during the AIR17 period. Ballinrees IR and Altikeeragh IR, which are operated by PPP, are not included in the table.

Raw Water Source – IRs	Total Capacity(ML)	Head WTWs
Altnahinch IR	1270	ALTNAHINCH WTW
Altnaheglish IR	2273	CAUGH HILL WTW
Clay Lake IR	1895	CLAY LAKE WTW
Lough Mourne IR	2621	DORISLAND WTW
Copeland IR	607	DORISLAND WTW
Lower South Woodburn IR	487	DORISLAND WTW
Upper South Woodburn IR	1669	DORISLAND WTW
Middle South Woodburn IR	2135	DORISLAND WTW
North Woodburn IR	372	DORISLAND WTW
Dorisland IR	302	DORISLAND WTW
Ben Crom IR	7721	DRUMAROAD WTW
Silent Valley IR	13276	DRUMAROAD WTW
Dungonnel IR	1090	DUNGONNEL WTW
Lough Island Reavy IR	9091	FOFANNY WTW
Spelga IR	3327	FOFANNY WTW
Fofany IR	395	FOFANNY WTW

Raw Water Source – IRs	Total Capacity(ML)	Head WTWs
Glenhordial IR	**100**	**GLENHORDIAL WTW**
Killylane IR	**1363**	**KILLYLANE WTW**
Lough Bradan IR	**611**	**LOUGH BRADEN WTW**
Lough Fingrean IR	**746**	**LOUGHMACRORY WTW**
Lough Fea IR	**539**	**LOUGH FEA**
Seagahan IR	**2220**	**SEAGAHAN**

The Water Supply Business Unit continues to keep the status of WTWs and Boreholes up to date and liaises with NIW's Asset Information Centre to ensure that this information is aligned with GIS. Any anomalies with information held on GIS, compared to that held by the Water Supply Business Unit, are identified and steps are taken to realign the data.

The table below summarises NIW's position, at 31st March 2017, regarding all borehole sites. This information was taken directly off NIW's Corporate Asset Register.

Status	Descriptor	Count
In Service	All sites that are currently in operation. Includes those that are maintained by either Operations or M&E	1
OOS Abandoned	Any site that is no longer in use and will never be returned to service. This may include facilities that are still in physical existence	56
Disposed	Any site which no longer belongs to NIW as it has been sold off	1

The count of one for borehole site 'in service', as shown in the table above, refers to Rathlin Island, at which there are 2 boreholes in service. Lough Carn One and Lough Carn Three boreholes are also in service but are not listed in the table above as they feed into Lough Carn, (and on into Lough Fingrean IR and Lough Macrory WTW) which is not counted as a source.

With ref to the NIAUR's Guidance, regarding the 'proportion of water taken from Lough Neagh that is included within Block A of each table and identify which source type'. – the PPP sources Castor Bay, Moyola and Dunore extract from Lough Neagh, with no extraction by NIW sources.

The following table identifies the proportion of water taken from Lough Neagh (which is classified as a 'River Abstraction' source) within Block A and B of Table 12:

Table 12 Block	Proportion of water extracted from Lough Neagh - NIW Only	Proportion of water extracted from Lough Neagh – PPP Only	Proportion of water extracted from Lough Neagh - Total
A	0%	0.887	0.402
B – with reference to Treatment Type W4	0%	0.928	0.728

Line 5 - Average pumping head – NIW only / PPP only / Total Company

The NIW 'Total' AIR17 Average Pumping Head is 119.58m.hd with a confidence grade of B4, an increase of 7.94m.hd from AIR16 (111.64m.hd).

Summary

In previous returns, the Average Pumping Head (APH) calculation has centred on using completed Detailed Zonal Study (DZS) area data. With the completion of the DZS Project, this has now become redundant as an information source. Thus, NI Water has been investigating alternative data sources, principally Telemetry, for updating and improving confidence. Data sourced from the NIW telemetry system, Telemweb, had been included in the APH calculation from AIR12. For AIR17 the use of data from Telemweb has continued to be used and has been expanded with 75% of pumpset returns based fully or in part on telemetry data. Information for 10% of the pumpsets is taken from zonal studies. Hence, sufficient information for 85% of the pumpsets is available for APH calculation.

For AIR17, NI Water had 369 pumpsets in service. Of these 233 are based on flow and/or lift data from Telemweb, 79 are based on DZS data and 57 have no / incomplete data, no return has been made for these pumpsets.

Reporter recommendations for previous returns stated pumpsets with a significant contribution to the overall calculation be targeted (say flow x lift >50m.h). There are 99 pumpsets with an individual contribution greater than or equal to 50m.h. Of these 96 are based on flow and / or lift data from telemetry. The other 3 were based on zonal studies.
The daily flow total for individual pumpsets is 1524.71Ml/d. Of this 1511.41/d is based on telemetry data. Thus 99% of flow is based on data relative to the reporting year. Similarly, the total lift for individual pumpsets is 17502.26, of which 4451.62m is based on telemetry data, equating to 25% of lift based on data relative to the reporting year.
The Average Pumping Head figure has increased by 7.94m.hd from AIR16. Distribution pumpsets have contributed an increase of 0.54m.hd to the overall figure, with Supply pumpsets a decrease of 0.39m.hd and PPP an increase of 7.78m.hd. Two pumpsets are no longer in service and with these removed from the calculation reduces the overall figure by 0.162m.hd. The increase can be attributed mainly to the drought management plan in place to conserve and restore reservoir stock with the increased dependency on Lough Neagh as a result.

The table below lists pumpsets whose contribution to the overall AIR17 APH figure has changed by 0.5m.hd or greater from its corresponding contribution in AIR16. These 11 pumpsets represents 8.13m.hd increase. The changes are explained in more detail further on in the commentary.

Name	AIR16 Individual APH	Contribution to Overall AIR16 APH Figure	AIR17 Individual APH	Contribution to Overall AIR17 APH Figure	Contributing difference from AIR16/AIR17
Dunore WTW HL (Hydepark & Ballyrobin)	9122.49	16.243	10537.25	18.382	2.14
Dunore RWPS	3908.05	6.959	4512	7.871	0.91
River Bann RWPS	2552.37	4.545	3199.03	5.581	1.04
Castor Bay RWPS	2697.12	4.802	3074.4	5.363	0.56
Castor Bay 1 WPS	6495.28	11.565	7124.48	12.429	0.86
Castor Bay 2 WPS	1731.66	3.083	3173.73	5.537	2.45
Castor Bay WPS	2678.75	4.77	2431.25	4.241	-0.53
Drumaroad - Dunmore WPS	5922.45	10.545	5360.49	9.351	-1.19
Faughan River RWPS	1450.4	2.583	1798.63	3.138	0.56
Long Kesh WPS	0	0	369.04	0.644	0.64
Lough Island Reavy Fofanny RWPS	1699.13	3.025	2130.39	3.716	0.69

Distribution pump data in master pump table

As mentioned above, the use of telemetry as a source has continued to be used and expanded, with approximately 75% of pumpsets returns now based on part or full telemetry data. . Information for 10% of the pumpsets is taken from zonal studies. Hence, sufficient information for 85% of the pumpsets is available for APH calculation.

This is in keeping with the Reporter's view that given the good progress made in recent returns with data from Telemetry being obtained, the rollout programme should continue. The report created to provide data from Telemweb only produces information from the date pumpsets are added. Some telemetry data for pumpsets may not be data based on the full reporting year but will be based on a minimum of 3 months. For future returns, the report will provide data for the whole reporting period.

For pumpsets with no telemetry data currently available, calibrated network models (Current Average Daily Demand Models) constructed by a framework of Consultants performing Detailed Zonal Studies (DZS) in various study areas across Northern Ireland continues to be the data source. Calibrated network model remains the primary information source.

No distribution pumpsets were removed from service during AIR17 reporting period.

No data was available for previous returns for the following pumpsets. Telemetry data is now available to allow a return to be made against them for AIR17.

- Crewbeg WPS ;
- Dunmore Mountain WPS
- Long Kesh WPS;
- Cullyhanna St Johns WPS

Where mean lift and average Average Daily Demand (ADD) flow cannot be obtained from a suitable calibrated network model / or telemetry, no estimation of these parameters has been included for distribution pumps in the Master Pump Table.

Changes to distribution pumpsets have contributed 0.54m.hd to the overall increase from AIR16. The main contributors are listed in the table below:

Name	AIR16 Individual APH	Contribution to Overall AIR16 APH Figure	AIR17 Individual APH	Contribution to Overall AIR17 APH Figure	Contributing difference from AIR16/AIR17
Long Kesh WPS	0	0	369.04	0.644	0.644

Long Kesh WPS is a new installation which has come into service during AIR17 with flow and lift data available from Telemweb.

Supply pump data in master pump table

Abstraction pumps, treatment process pumps and WTW outlet pumps have not generally been included in the DZS network models. Therefore, local NI Water supply personnel have provided data from a variety of sources, listed below, for the determination of mean lift and average current flow for each pump supplying the distribution zones.

- Telemetry (Telemweb),
- Direct readings of dials from pump sites,
- Record Drawings for pump lift, and
- NIW Total Flow Calculations for WTW in NI.

As with distribution pumpsets, the use of telemetry data has been sought for Supply pumpsets, with all but 2 of the 41 Supply pumpsets based on flow and / or lift data obtained from Telemweb.
For AIR17 Camlough WTW has been taken out of service which included two pumpsets, Camlough Product Water and Camlough Derry Beg. These two pumpsets have been removed from the calculation.

Changes to Supply pumpsets have contributed a decrease of 0.39m.hd to the overall change from AIR16. The main contributors are listed in the table below:-

Name	AIR16 Individual APH	Contribution to Overall AIR16 APH Figure	AIR7 Individual APH	Contribution to Overall AIR17 APH Figure	Contributing difference from AIR16/AIR17
Drumaroad - Dunmore WPS	5922.45	10.545	5360.49	9.351	-1.19
Faughan River RWPS	1450.4	2.583	1798.63	3.138	0.56
Lough Island Reavy to Fofanny RWPS	1699.13	3.025	2130.39	3.716	0.69

Drumaroad-Dunmore WPS – the plant manager has indicated that towards the end of the AIR17 period water production had been reduced to preserve/replenish water stock at Silent Valley as part of the drought management plan.

Lough Island Reavy Fofanny RWPS – similar to Drumaroad as part of the drought management plan to preserve Fofanny & Spelga water stocks.
Faughan River RWPS – the increase is attributed to the introduction of the lift figure from an efficiency report by Boulting Group. The lift figure replaces the static lift figure previously used.

Distribution Input (DI)

The Company DI by Supply Source (573.23Ml/d) has been provided by the Company's Leakage Data Management Unit, as has the PPP Only DI (259.88Ml/d) and the NIW Only DI (313.35Ml/d), obtained by adding the relevant Water Supply sources.

PPP pump data in master pump table

Flow and lift information has been provided by the PPP Concessionaire through Contracts Management Section and have provided the following commentary:
The Average pumping head – total (Line 5) has been calculated in accordance with the calculation described in the Guidance.

Dalriada installed pressure gauges for manual readings at each of the Delivery Points (with the obvious exception of the 2 gravity feed points at Ballinrees) as listed below:

- Moyola HLP
- Ballinrees HLP (Moy's)
- Magheraliskmisk HLP (CB1)
- Ballydougan HLP (CB2)
- Forked Bridge (FB)
- Crewe Hill HLP (FB2)
- Dunore Point HLP (DP1 & DP2)

In conjunction with the updated average flows has produced an updated average pumping head calculation when applied to the agreed formula for Average Pumping Head.

Lift (m)

The marginally differing figures supplied for the current reporting period (2016/17) from the last submission (2015/16) is due to the fact that these Lift figures continue to be derived from the pressure gauges on High Lift and for Interstage or Low Lift taken from the quoted values that are physically stamped on each pump. This procedure has enabled these figures to be consistent with last year's approach. This has demonstrated an Increase in overall calculated Average Pumping Head.

Average to Supply (Ml/d)

Note that the average flows represent updated figures for the 2016/17 year. These have been derived from dispatch records over the past year, which record - via a series of frequently calibrated flowmeters at each Delivery Point on site - the volumes dispatched to NIW in accordance with the dispatch requests received and from on-site records and SCADA trends of interstage volumes. In addition, the Lift has been shown for each interstage process at each site. Therefore, in conjunction with the updated average flows this has produced an average pumping head calculation when applied to the agreed formula for Average Pumping Head.

The Confidence Grade remains as B2 as per the Reporter recommendations from the AIR16 submissions.

Changes to PPP pumpsets have contributed 7.78m.hd increase to the overall figure from AIR16. The main contributors to the change are:

Name	AIR16 Individual APH	Contribution to Overall AIR16 APH Figure	AIR7 Individual APH	Contribution to Overall AIR17 APH Figure	Contributing difference from AIR16/AIR17
Dunore RWPS	3908.05	6.959	4512	7.871	0.91
Dunore WTW HL (Hydepark & Ballyrobin)	9122.49	16.243	10537.25	18.382	2.14
River Bann RWPS	2552.37	4.545	3199.03	5.581	1.04
Castor Bay RWPS	2697.12	4.802	3074.4	5.363	0.56
Castor Bay 1 WPS	6495.28	11.565	7124.48	12.429	0.86
Castor Bay 2 WPS	1731.66	3.083	3173.73	5.537	2.45
Castor Bay WPS	2678.75	4.77	2431.25	4.241	-0.53

Generally, the increases can be attributed to the Drought Management Plans in action at NI Water supply sites with increased demand on Lough Neagh water to compensate, and the flow lost from the removal of Camlough WTW, which has been covered by Castor Bay.

There is a slight discrepancy between the PPP APH figure (157.41m.hd) calculated by the PPP Concessionaire and the figure calculated by NIW (157.27m.hd). The discrepancy has occurred as PPP used a DI figure of 259.66Ml/D whilst NIW has used 259.88Ml/D, which is based on data provided by the Company's Leakage Data Management Unit as indicated above.

PPP only and NIW only 'Average Pumping Head' calculations

Average Pumping Head is by definition the amount of pumping required to transport an average ML of water from abstraction at source to supply the customer through the Distribution Network.

The NIAUR AIR14 Guidance for Table 12 requested an 'Average Pumping Head' to be calculated for NIW only and PPP only. It should be noted that it is NIW's interpretation that the true definition (as stated above) of Average Pumping Head is not being reflected through the splitting up of the overall NIW Average Pumping Head value.

The NIW only and PPP only 'Average Pumping Heads' are 88.32m.hd and 157.27m.hd respectively. The PPP only value is in relation to the Pumping Head within the works. PPP WTWs do not have specific Distribution Networks, and therefore the water is extracted, treated and then exits the works into the NIW Distribution Network. Within the Distribution Network, PPP water then mixes with NIW water, therefore making it impossible for NIW and PPP flows to be truly separated for use in PPP only and NIW only average pumping head calculations. Hence, the value of 157.27m.hd calculated for PPP only is more in relation to the Pumping Head within the works.

However, the NIAUR AIR14 guidance document for Table 12 stated 'Average Pumping Head should be calculated for 'NI Water only', 'PPP only' and the 'total company'. Different denominators should be used to calculate the average pumping head for each table (i.e. 'NI Water only', 'PPP' and 'Total') reflecting the amount of water entering supply from NI Water treatment works, PPP treatment works and in total, respectively. There is no requirement for the sum of the NI Water and PPP pumping head figures to equal the total company APH. The numerator for the 'NI Water only' calculation should reflect pumping from NI Water treatment works and all NI Water distribution system pumping. The numerator for the 'PPP' calculation should reflect only pumping associated with the PPP concession.'

NIW has complied with this request and has provided separate Average Pumping Head values for NIW only, PPP only and the Company 'total'. The respective distribution input values, associated with NIW only, PPP only and Company 'total' sources have been used as denominators to calculate the respective Average Pumping Head values.

The issue, outlined above, as posed by NIW in previous returns regarding the proportioning of the Average Pumping Head between NIW Only and PPP Only, is further exacerbated through the AIR14 approach, as requested by NIAUR. The use of the PPP source related DI, as a denominator to calculate the PPP Average Pumping Head, indicates the amount of pumping required to transport an average ML of water from abstraction at source to the 'exit' gate of the WTWs. However the use of the NIW Only source related DI, as a denominator for the NIW Only Average Pumping Head, indicates the amount of pumping required to transport an average ML of NIW Only water from abstraction at source to supply the customer through the Distribution Network, in addition to the pumping required to transport an average ML of PPP Only water from the 'exit' gate of the PPP WTWs through the NIW Distribution Network.

Data shortcomings

Calibrated hydraulic network models used in the data collection of pump lift and head have been built by a framework of DZSC's over a period of more than five years. Thus, models used have various calibration days.

Leakage reduction and changes to the system subsequent to the field test and model construction have not been taken into account. New pumps or pumps not field tested / modelled will also have no data available from DZSC's.

NI Water distribution input for WTW's/sources in NI are current 2016/17 figures which may not absolutely match pump data available from the older network models but this represents the best combination available.

The report set up to provide telemetry data from Telemweb has been available since November 2012. The report created to provide data from Telemweb only produces information from the date telemetry points are added. Some telemetry data for pumpsets may not be based on the full reporting year but will be based on a minimum of 3 months. For future returns, the report will provide data for the whole reporting period.

Data relating to lift from telemetry is limited. Where flow data only is available from telemetry, lift data from the DZS model has been used. These may not be an absolute match but represents the best combination available.

No return has been for the 57 of the 369 pumpsets which have an 'in service' operational status during AIR17 but have no or incomplete data. As the majority of these pumpsets

are distribution booster sets, it is anticipated, if full data were available, it would have minimal impact on the overall figure.

Confidence Grade

As per the Reporter recommendations from the AIR16 submission, a confidence grade of 'B4' has been allocated to the values of 88.32m.hd and 119.58m.hd for the 'Average Pumping Head' for NIW only and total respectively, with a confidence grade of 'B2' for PPP only to reflect the high extent of telemetry data.

The confidence grade for PPP Only Part A – Line 3 is changed to A1 to reflect the fact that there are no boreholes involved in PPP works.

Improvements from AIR16

Shortcomings highlighted in previous returns included the age of data from network models and as such subsequent leakage reduction and network changes would not have been taken into account. This is being addressed with the increasing use of Telemetry data. Telemetry data is relevant to the current reporting year with flow data more in line with the DI figure. With 99% of flow and 25% of lift now based on data relevant to the reporting period, data quality continues to improve.

AIR16 Recommendation

Following AIR16, the Reporter highlighted two recommendations for consideration in AIR17 Average Pumping Head return.

Recommend initial focus on confirmation of static lifts at significant raw water and interstage pump sites.

There are four RWPS with significant static lift figures, Faughan River, Lough Ross, Lough Island Reavy Fofanny and Rathlin Island. As part of an efficiency project under JI069-WPS Pump Efficiency Capital Investment Ph1, site surveys were carried out which included static, design and actual head readings. The report included Faughan River, Lough Ross and Lough Island Reavy Fofanny which indicate the static head to be similar to that which was previously been returned and therefore reasonable to adopt the actual (dynamic) lift and has been included in the average pumping head calculation for AIR17. Rathlin Island although having a lift of 90m the change would be minimal due to the low flow and therefore has not been taken further. The remaining pumpsets have relatively minimal lifts figures and in their nature, particularly interstage pumps, lift will generally remain constant and have not been considered further.

Develop long-term plan for improvement of lift head measurement in APH calculations with consideration for one-off checks at key sites prioritised by sites >50m.hd.

As mentioned above, in 2013 Boulting Group was commissioned (through project JI069) by NI Water to investigate the feasibility of energy and cost reduction from pump and system optimisation.

Name	Site CAR ID	Mean AIR16 Lift (m)	Average Current AIR16 ADD Flow (Ml/day)	Ave AIR16 Pumping Head (m.hd)	Boulting Report Lift (m)	APH Based on AIR16 Flows & Boulting Lift (m.hd)
Hydepark North WPS	S00037	53.50	7.96	425.86	52.0	413.92
Ballywonard WPS	S00034	50.13	1.45	72.69	49	71.05
Ballywonard 2 WPS	S00034	98.50	0.93	91.61	102	94.86
Westland WPS	S00039	49.5	3.08	152.46	30.8	94.86
Whiteabbey Lwr WPS	S00014	73.79	2.02	149.06	81.3	164.23
North Road Carrickfergus WPS	S00012	116.67	5.20	606.68	123	639.6
Faughan River RWPS	S03792	80.0	18.13	1450.4	98.8	1791.24
Carmoney WPS	S03495	102.00	3.61	368.32	119.5	431.4
Poleglass WPS	S00026	47.30	3.44	162.71	50.0	172.0
Lough Ross RWPS	S02340	86.00	4.53	389.53	93.2	422.2
Lough Island Reavy Fofanny RWPS	S02670	157.00	10.62	1667.27	157	1667.34
TOTAL		**933.19**		**5536.59**	**956.6**	**5962.7**

The table above lists out the locations at which Boulting carried out site surveys. The actual head from the report has been included in the table for comparison with DZS lift data used in AIR16. The survey dates for the DZS data range from 2003 to 2009. As can be seen there is good correlation between the DZS lift figures and the lift figures provided by Boulting, an increase of 2.5% between the two lift totals. There are 100 pumpsets with an individual 50m.hd. Therefore, the comparison represents a 10% check. The comparison provides confidence that the DZS lift data is fairly accurate and is well within the CG of B4. If the lift data from the Boulting report is added the AIR16 APH calculation sheet a figure of 112.38m.hd is produced (AIR16 APH 111.64m.hd) an increase of 0.7%. The lift data contained within the Boulting report has been used in the APH calculations for AIR17.

Future improvements

Continue the interrogation of Telemweb for relevant data.

Going forward, the ICAT and the Water Rehab programmes will help provide improved lift data.

Another possible avenue for data improvement is through the base maintenance programme. As part of any base maintenance being carried out, pressure sensors could be installed and connected to telemweb.

The Head of Asset Lifecycle Planning has been consulted regarding the development of a long-term plan for improvement of lift head measurement in APH calculations.

Average Pumping Head 'total' result comparison from 2008 to 2017

	DI Ml/d	Sum (flow x lift)	Average Pumping Head (m.hd)
2008 Assessment	284.459	31655.54	111.28
2009 Assessment	420.93	47845.27	113.67
2010 Assessment	609.62	84470.31	138.57
2011 Assessment	627.5	100446.95	161.82
2012 Assessment	585.09	91225.01	155.90
2013 Assessment	559.37	78170.54	139.7
2014 Assessment	562.4	75211.22	133.73
2015 Assessment	564.92	64740.9	114.6
2016 Assessment	561.62	62697.39	111.64
2017 assessment	573.23	68539.45	119.58

PPP only

Lines 1- 4 Column 1 only – Number of sources (PPP)

The PPP Water sources have remained consistent over the reporting period for AIR17 as they were with AIR16. In accordance with AIR16, NI Water has included the River Bann intake as an additional source to Ballinrees WTW. The reasoning used is, that there exists the potential to source the WTW directly from the River Bann rather than purely directing this source from the Ballinrees Impounding Reservoir. NI Water has also included the Altikeeragh IR as a source for Ballinrees WTW as it supplied a proportion of the water for Ballinrees WTW during the period 2016-17 as it did in 2015-16.

Line 5 Column 4 only – Average pumping head (PPP)

The reported data is solely due to the average flows called by the Company from its PPP sites, it has varied from last year's average flows.

Lines 6-10 Column 1 only – Types of Treatment by Proportion (PPP)

No changes to the PPP types of treatment over the reporting period.

Lines 6-10 Column 2 only – Total number of Units referred to Type (PPP)

No changes to the PPP types of treatment over the reporting period.

Line 13 - Potable mains

This figure has been extracted from the Corporate Asset Register. There has been no change to the structure of the data reported on this year from the previous years that would directly affect the total provided. The confidence grade of the data will remain the same as the previous year. There have been no significant improvements in data quality since the AIR16 reports. Any new data will have adhered to the NIW Code of Practice for the submission of asset data ensuring that data quality levels have been maintained throughout the year.

As per the reporters recommendation during the AIR14 audit this figure includes trunk mains that are marked as “Out of Service” on the Corporate Asset Register. This recommendation was made as although these mains are currently out of service they are not abandoned and could potentially come back into service in the future.

No changes to the length of Potable Mains operated by the PPP Contractor over the reporting period.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 13 NON FINANCIAL MEASURES
SEWERAGE PROPERTIES & POPULATION (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	PROPERTIES																				
1	Households properties connected during the year	000	3	3.455	B2	3.108	B2	2.627	B2	4.076	B2	0.177	B2								
2	Non-households properties connected during the yea	000	3	0.123	B2	0.106	B2	0.13	B2	0.198	B2	0.041	B2								
B	BILLING																				
3	Households billed unmeasured sewage	000	3	586.127	A2	591.043	B2	594.525	A2	599.994	A2	609.753	A2								
4	Households billed measured sewage	000	3	0.000	A1	0.000	A1	0.000	A1	0.000	A1	0.000	A1								
5	Households billed sewage	000	3	586.127	A2	591.043	B2	594.525	A2	599.994	A2	609.753	A2								
6	Non-households billed unmeasured sewage	000	3	9.250	A2	8.706	A2	8.132	A2	7.513	A2	7.314	A2								
7	Non-households billed measured sewage	000	3	23.014	A2	23.347	A2	23.56	A2	23.809	A2	24.343	A2								
8	Non-households billed sewage	000	3	32.250	A2	32.053	A2	31.692	A2	31.322	A2	31.657	A2								
9	Void properties	000	3	44.637	A2	44.479	B2	44.164	A2	43.463	A2	42.551	A2								
C	POPULATION																				
10	Total connected population	000	3	1,512.024	B3	1,514.925	B3	1,521.776	B3	1,529.734	B3	1536.699	B3								

Table 13 – Sewerage Properties and Population (Non-financial measures)

Introduction

Table 13 focuses on the number of properties and population connected to the public sewerage supply system. It extends to 10 lines, set out in three blocks:

- Block A Properties (Lines 1 & 2). Reports properties connected during the year.
- Block B Billing (Lines 3-9). Includes a breakdown of all measured and unmeasured household and non-household properties billed by the company. The property numbers should be the average for the reporting year.
- Block C Population (Line 10). This records the population within each of the measured and unmeasured household and non-household categories. The population numbers should be the average for the reporting year.

The information in this table is used in tariff and charging analysis and determination (sewerage unit cost).

Definition of 'Billed' Properties

Domestic customers were originally due to be charged for water and sewerage charges from April 2007. However, this was deferred in April 2007 and has not been implemented since. There are no apparent plans for charges to be implemented during 2017/18. NI Water is subsidised for these domestic customers by Department for Regional Development (DRD) (note: DRD is the now Department of Infrastructure DFI).

In April 2008, NI Water extended the charging in the non-domestic sector to include unmeasured non-households in addition to the measured non-household customer base. These charges are based on the NAV of the non-household property, derived from annual information provided by Land and Property Services (LPS).

Northern Ireland Water introduced sewerage charging to include non-households, phased in at 50%. Volumes returned to sewer are assumed to be 95%, based on standard industry figures, unless the customer challenges this assumption, whereupon they can apply for a non-return to sewer allowance, which will be investigated and determined by NIW.

For clarity, where reference is made in Table 13 to 'billed' household and 'billed' non-household, this is taken as the provision of water services to customers whether they are billed directly (non-domestic customers) or payment is made through subsidy by DFI (domestic customers).

Classification of Farms

As with Table 7 (Water) - per Utility Regulator guidelines, farms were reclassified as billed non-households for AIR09 – this has remained for AIR17. Previously, in AIR08, farms had been classified and reported as 'billed' households on the principle of their status and allocation of 'domestic allowance'.

Data Sources, Data Validation and Data Quality Projects

As with Table 7 (Water), the key source of information for the new connections and property data is the customer billing database, RapidXtra.

Customer information is updated through;

- 'business as usual' customer contacts, such as new connection requests, move in/move outs, or
- through Data Quality initiatives/Projects and/or

- Metering work streams e.g. UNHH, Optants, and Proactive Meter Exchange etc.

Under the Water & Sewerage Services (2006) Order, NI Water is required to install meters on all new household connections since April 2007. This practice has stopped as directed by a change is legislation which took effect in July 2016. The legislation was amended by Regulations, which in effect relieved NIW of the obligation to install meters at newly connected domestic properties. As domestic customers are not charged on a measured basis, the property is reported as unmeasured. Some domestic properties were initially reported as measured in AIR10 but this was rectified as per the erratum to AIR10. Depending on the basis for charging when domestic billing is introduced, these customers can be activated as measured household if required.

Data on property counts and classifications continue to be reported monthly from Rapid. The Rapid Property Summary (RPS) provides us with a snapshot at the end of each month in terms of gross movements; it does not support us in the explanation of net movements within the data.

Data on population continues to be obtained from Northern Ireland Statistics and Research Agency (NISRA), adjusted for the winter months based on information published by the Department for Economy (DFE) and the Central Statistics Office (CSO), Ireland.

From the Rapid Property Summary there are deemed to be 620 (gross) 'unmeasured – not charged' properties which (based on sample taken) are mostly NI Water properties. NI Water are currently investigating any 'unmeasured – not charged' properties outside of NI Water ownership to ensure they are classified correctly.

Background

As Table 13 is based on averages, please find summary table below for 'End March 2016' and 'End March 17'. The '1st Dec 2016' are actual numbers used in the Principal Statement and Tariff Setting process.

Property Numbers	March 2016	1st Dec 2016	March 2017	Expected Movement
Unmeasured Sewerage Household	604260	612427	615246	Increase
Unmeasured Sewerage Non-Household	7258	7283	7343	Decrease
Measured Sewerage Non-Household	24041	24683	24645	Increase
Voids	43182	41946	41949	

The variances in our property numbers from AIR16 to AIR17 can be explained by the following:

1. New Connections during the reporting year. The figures are based on the data supplied by our New Connections team of the actual connections made in 2016/2017. Previously we generated these figures from Rapid however AIR 16 identified issues with this method due to incorrect classification of things like lead pipe replacements as new connections. From this NIW set up a project to investigate and review data and procedures. Until the completion of this, we are using the figures from the new connections team as the most accurate source. Once it is complete, it will allow us to extract this data from a system run report again.

2. As a result of a customer contact. E.g. septic tank empty request, no water complaint, blocked sewer, updating of standing data e.g. removal of services etc. Within this category there are 2 scenarios:
    - The adding of properties NI Water allegedly didn't know about and
    - The adding of duplicates as the customers address couldn't be found on Rapid.

    (For example, Rapid may hold the site number but when the customer contacts NI Water they quote the verified postal address, which is different, therefore creating a duplicate. Another scenario - The street name may have changed from the time of New Connection to that of customer contact – street names can change in the early stages of site development)
3. Removal as a result of data quality initiatives.
    - Duplicate properties
    - Reclassifications of properties that were recorded in error
    - Reclassifications of new connections. The decrease is as a result of reclassifications on New Connections in 15/16 as highlighted in last year's commentary as well as the change in the processes within the Customer Connections Team.
4. The increased number of properties within the no water/well water category. Further detail is provided within the Table 7 commentary.

The work on data validation is ongoing, with new validations 'live' as a result of the Customer Billing and Contacts (CBC) Project Phase 1 & 2 implementation. Further validations will be implemented in Phase 3 & 3a during 2016/17 & 2017/18. These validations include Point of Entry controls, System based classification alignment, Intra and Inter table/field alignment, etc. In addition, other data quality requirements have been built into the new CBC Contract. They cover all aspects of the property life cycle (creating, amending and demolishing properties) and data degradation will be monitored/measured throughout.

The difference between the gross increase in properties and the number of new connections can be attributed to

- movement from the no water/well water category to unmeasured supplied, and
- movement in occupancy status (from void to occupied).

Test Meters

As per Table 7 the remaining 'test' and 'retain for review' meters are currently under review within Projects and Business as Usual activity.

The movement within the Test Meter category of the RPS is shown below.

	Test Meters (2016)	Test Meters (2017)	Movement
Household	266	161	105 reduction
Non-Household	734	507	227 reduction

There is an active project to confirm the classification of test and 'retain for review'. Currently all have been reviewed as of January 2017. Further desktop analysis is planned to be completed with the majority closed by March 2018.

Site Metered Properties

As part of the ongoing data checks, NIW has been confirming the number of site metered properties (multiple properties being charged through a single meter, such as business parks and industrial estates).

To ensure that these meters are not double counted, as with Table 7, the non-domestic site meters are not included in Table 13 non-domestic property counts (although NIW still retain this information for customer record and charging purposes).

There are 573 domestic properties classified as site meters and these will require further investigation and analysis to be completed during 2017/18 to ensure these are classified correctly.

There is an active project to confirm the classification of site metered properties – this is currently targeting the Belfast Harbour Estate and any lessons learned will be considered for other sites and also working closely with LPS to see how we can exploit their data to confirm customers and properties deemed connected to site meters.

Overall, the number of non-domestic site meters has increased by 73 during 2016/17. This has resulted from categorisation movements in year such as measured water to site meter and unmeasured water to site meter.

Unmeasured Household Property Movement

The table below provides a reconciliation of the reporting year property movements and resulting property numbers. It sets out how the properties have changed over the reporting year, due mainly to new connections, with some nett minor movement in the occupancy status. Note: these reported figures include domestic properties that are metered but as NI Water does not bill households for water, they are reported as unmeasured.

Property Numbers	March 2016	Dec 2016	March 2017	Expected Movement
Unmeasured Sewerage Gross Household (L9 year-end sub calc)	638109	645843	648573	Increase
Unmeasured Sewerage Occupied Household (L3 year-end sub calc)	604260	612427	615246	Increase
Unmeasured Sewerage Voids Household	33849	33416	33327	

Household Voids	Voids	Difference (in year)
March 2016	33327	(-) 522
March 2015	33849	(-) 454
March 2014	34303	

Measured Household Property Movement

Due to the deferral of domestic charging, NI Water does not bill households for unmeasured or measured water, therefore we don't report figures for measured household property movements (they are included in the unmeasured line as they are not billed)

Unmeasured Non-Household Property Movement

Property Numbers	March 2016	1st Dec 2016	March 2017	Expected Movement
Unmeasured Sewerage Gross Non-Household	13942	13215	13190	Decrease
Unmeasured Sewerage Occupied Non-Household (L6 year end sub calc)	7258	7283	7343	Increase
Unmeasured Sewerage Voids Non-Household	6684	5932	5847	

Measured Non-Household Property Movement

Property Numbers	March 2016	1st Dec 2016	March 2017	Expected Movement
Measured Sewerage Gross Non-Household	26674	27263	27396	Increase
Measured Sewerage Occupied Non-Household (L7 year end sub calc)	24041	24683	24645	Decrease
Measured Sewerage Voids Non-Household	2633	2580	2751	

Non Household Voids

Non-Household Voids	Voids	Difference (in year)
March 2017	8622	(-) 711
March 2016	9333	(-) 140
March 2015	9473	

Annex A details the methodology followed for the figures calculated in Table 13.

Confidence Grades

We have kept the confidence grades consistent with those of AIR16. During the reviews mentioned in the company commentary above, we will retain evidence to support any change in confidence grades.

Whilst the quality of data will improve, the method of extraction and reporting remained consistent. The automated tool (developed during AIR12) to populate the base property tables has remained in place for AIR17.

Annex A – Line Methodology for Table 13

Sewerage Properties and Population

Line 1 - Household Properties Connected during the Year

This line represents the number of new household (domestic) properties added to the sewerage network during the reporting year (Previously not connected to the sewerage system).

An issue with the system report has resulted in a change in methodology for this year. The figures is based on the actual completed connections within 2016/17 as per embedded document. It is NIW policy to install meters on all Non Household New Connections.

AIR17_NCs_1617_6646.xlsx

Households properties connected during the year	177

The number of new domestic connections for the year is 177.

Line 2 - Non-Household Properties Connected during the Year

This line represents the number of new non-household (non-domestic) properties added to the sewerage network during the reporting year (Previously not connected to the sewerage system).

An issue with the system report has resulted in a change in methodology for this year. The figures is based on the actual completed connections within 2016/17 as per embedded document. It is NIW policy to install meters on all Non Household New Connections.

Non-Households properties connected during the year	41

The number of new non-domestic connections for the year is 41.

Line 3 - Households Billed Unmeasured Sewerage

Due to the deferral of domestic charging, NI Water does not bill households for unmeasured sewerage.

This figure refers to the average number of households billed for unmeasured sewerage within the supply area. Void properties have been excluded, so occupied numbers only are used.

This is calculated from the monthly Rapid Property Summary for AIR17 (dated 31st March 2017) as embedded below.

Rapid Property Summary - March 20

Households Billed Unmeasured Sewerage	End March 2016	End March 2017
Household - Unmeasured	575027	583801
Household - Sewerage Only	6	6
Household - Measured – Not Charged (test meters)	263	152
Household - Measured	28427	30700
Household – Site Meters	521	573
Household - Unmeasured - Not Charged	16	14
Total	604260	615246
Average (Apr16/Apr17)	**609753**	

The figure represents the number of unmeasured domestic properties that would have been billed had charging been introduced.

Line 4 - Households Billed Measured Sewerage

Due to the deferral of domestic charging, NI Water does not bill households for measured water. Therefore any household properties that would have been included in line 4 are now included in line 3, as per AIR17 Table 7.

Households Billed Measured Sewerage	End March 2016	End March 2017
	0	0
Average (Apr16/Apr17)	**0**	

Line 5 - Households Billed Sewerage

Due to the deferral of domestic charging, NI Water does not bill households for sewerage.

This figure excludes void properties and is calculated as below: (Table 13 line 2 plus line 4)

Households Billed Sewerage	Average 16/17
Households billed unmeasured sewerage	609753
Households billed measured sewerage	0
Total	**609753**

This figure represents the number of domestic properties that would have been billed had charging been introduced.

Line 6 - Non-Households Billed Unmeasured Sewerage

This is the average number of non-households billed for unmeasured sewerage within the supply area, calculated from the Rapid Property Summary.

Figures are based on Rapid, average of End March 2016 and End March 2017 non-domestic unmeasured properties.

Non-Households Billed Unmeasured Sewerage	End March 2016	End March 2017
Non-Household – Unmeasured	7258	7343
Non-Household - Sewerage Only	13	14
Total	7271	7357
Average (Apr16/Apr17)	**7314**	

Line 7 - Non-Households Billed Measured Sewerage

This refers to the average number of non-households billed for measured sewerage within the supply area, calculated from the Rapid Property Summary.

Figures are based on Rapid, average of End March 2016 and End March 2017 non-domestic measured sewerage properties.

Non-Households Billed Measured Sewerage	End March 2016	End March 2017
	24041	24645
Average (Apr16/Apr17)	**24343**	

Site metered properties are a subset of the overall non-domestic billed measured sewerage customer base, therefore not included in the figure above (as per AIR17 Table 7). Where many customers are served through one site meter, only the landlord or business park management are considered as the customer and the other business are tenants.

Line 8 - Non-Households Billed Sewerage

This is the total number of non-households billed for sewerage within NI Water's area, excluding void properties. It is a calculated figure of Table 13 Lines 6 and 7.

Non-Households Billed Sewerage	Average 16/17
Non-Households Billed Unmeasured Sewerage	7314
Non-Households Billed Measured Sewerage	24343
Total	**31657**

Line 9 - Void Properties

This is the average number of properties, within the supply area, which are connected to the sewerage system but do not receive a charge, as there are no occupants – (void properties).

This is calculated from the Rapid Property Summary for AIR17 by calculating the gross number of properties connected to the sewerage system minus the total number occupied as calculated in lines 5 and 8.

Gross Number of Properties Connected to the Sewerage System	End March 2016	End March 2017
Household - Unmeasured	605023	612707
Household - Sewerage Only	6	6
Household – Measured - Not Charged (test meters)	266	161
Household - Measured	32172	34985
Household – Site Meters	625	698
Household - Unmeasured - Not Charged	17	16
Non-Household – Unmeasured	13942	13190
Non-Household – Sewerage only	18	19
Non-Household - Measured	26674	27396
Total	678743	689178
Average (Apr16/Apr17)	**683961**	

Trade Effluent customers have been excluded from the above figure as they could already be included in measured sewerage. Trade effluent is considered within other tables of the AIR17 submission.

Voids	End March 2017
Total Gross Properties (as above)	683961
Less total occupied properties (line 5 [609753]+ line 8 [31657]) =	641410
Total	**42551**

Line 10 - Total Connected Population

This figure is a calculation of the total population multiplied by the properties connected to the sewerage system as a proportion of the properties connected for water (according to the Rapid Property Summary).

The average totals for gross occupied sewerage and water properties are obtained using the Rapid Property Summary for End March 2016 and End March 2017.

	End March 2016	End March 2017	Average 16/17		
Gross number of properties connected for sewerage	674784	683961	679372		
Gross number of properties connected for water (T7 L7 + T7 L11)	833885	846055	839970		
Calculation = Sewerage Properties / Water Properties			**80.88%**	**Therefore, Total Connected Population equals (Table 7 Line 17 [1,861,580] * 80.88%) + Table 17a Line 2 [31,054]**	**1,536,699**
				1,505,645+31054	

As detailed above, the number of sewerage properties has been calculated as 80.88% of those with water; this percentage is then applied to the total water population from Table 7 Block C.

(Water population total (Source Leakage Section) X 80.88%) + Non-Resident Population (Source CSD) = Table 13 line 10

(1,861,580 X 80.88%) = 1,505,645 + 31,054 = 1,536,699

T13 L10	**1536.699**

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 14 NON FINANCIAL MEASURES
SEWAGE COLLECTED (TOTAL)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	SEWAGE - VOLUMES																				
1	Volume unmeasured household sewage	Ml/d	2	243.14	B3	232.74	B3	237.61	A2	238 81	A2	244.60	B2								
2	Volume unmeasured non-household sewage	Ml/d	2	5.53	B3	4 89	B3	4.69	A2	4 25	A2	4.18	B2								
3	Volume unmeasured sewage	Ml/d	2	248.67	B3	237 63	B3	242 3	A2	243.06	A2	248.78	B2								
4	Volume measured household domestic sewage	Ml/d	2	0.00	A1	0 00	A1	0.00	A1	0 00	A1	0.00	A1								
5	Volume measured non - household domestic sewage	Ml/d	2	35.9	B3	36 65	B3	39.11	B3	38.72	B3	41.50	A2								
6	Volume trade effluent (excluding Roads Drainage)	Ml/d	2	34.12	B2	41.73	B2	48.49	B2	49 96	B2	49.00	B2								
7	Volume waste water returned	Ml/d	2	318.69	B3	316.01	B3	329.90	B3	331.74	B3	339.28	B3								
8	Volume of Roads Drainage returned	Ml/d	2	175.80	CX	175 80	CX	175.80	CX	175 80	CX	175.80	CX								

Table 14 – Non Financial Measures - Sewage Collected (Total)

Line 1 – Volume Unmeasured Household Sewage

This is calculated by assuming a 95% return to sewer of volume delivered to households factored by the percentage of the number of households billed for water against the number of households billed for sewerage services.

Sources

- AIR Table 10 Line 4 – Billed unmeasured household (Ml/d)
- AIR Table 13 Line 3 – Households billed unmeasured sewage
- AIR Table 7 Line 3 – Households billed unmeasured water

$$\text{Volume of unmeasured household sewage (Ml/d)} = \text{AIR Table 10 Line 4} \times 0.95 \times \frac{\text{AIR Table 13 Line 3}}{\text{AIR Table 7 Line 3}}$$

It is worth noting that water Billed unmeasured household volume includes the MLE adjustment, meter under registration and supply pipe leakage.

The Billed Unmeasured Household volumes have been calculated by multiplying the average PCC figure for NI Water by the unmeasured household population. The source of the PCC figure is the NI Water domestic consumption monitor. The household population figure is sourced from the Northern Ireland Statistics and Research Agency (NISRA).

Underground Supply Pipe leakage has been applied to the billed unmeasured household volume component of this calculation.

A meter under registration factor of 7.39% has been applied to this total volume. This percentage has been provided by WRc, as a result of a project initiated by NI Water, and is specific to NI Water's domestic consumption monitor meters.

The AIR17 volume reported for unmeasured household sewage is 244.60 Ml/d. The volume reported in AIR16 was 238.811 Ml/d.

Line 2 - Volume Unmeasured Non-Household Sewage

This is calculated by assuming a 95% return to sewer of volume delivered to non-households factored by the percentage of the number of non-households billed for water against the number of non-households billed for sewerage services.

Sources

- AIR Table 10 Line 5 – Billed unmeasured non-household (Ml/d)
- AIR Table 13 Line 6 – Non-households billed unmeasured sewage
- AIR Table 7 Line 8 – Non-households billed unmeasured water

$$\text{Volume of unmeasured Non-household sewage (Ml/d)} = \text{AIR Table 10 Line 5} \times 0.95 \times \frac{\text{AIR Table 13 Line 6}}{\text{AIR Table 7 Line 8}}$$

It is worth noting that water Billed unmeasured non-household volume includes the MLE adjustment, meter under registration and supply pipe leakage.

The reported value for Billed Unmeasured Non-Household for AIR17 is 5.17 Ml/d. The value reported in AIR16 was 5.28 Ml/d.

The AIR17 volume reported for unmeasured non-household sewage is 4.18 Ml/d. The volume reported in AIR16 was 4.25 Ml/d.

Line 5 - Volume Measured Non-Household Domestic Sewerage

The reported sewerage figure was based on actual billed sewerage discharge April 16 to March 17. The discharge volumetric information was derived directly from:

- The monthly 'Reconciling' Reports Apr16-Mar17 - detailing actual billed sewerage discharge m^3.
- The DfI Domestic Allowance Subsidy Assurance Report Apr16 – Mar17 – detailing actual domestic sewerage allowance applied per bills.
- Monthly FN12 Transaction Reports Apr16 – Mar17 – detailing Bad Debt Write-Off by Charge Type.

The calculated sewerage discharge volume was 15,147,164 m^3 converted to mega litres per day of 41.50 Ml/d.

Sewerage volume is 7% (1,012,759M^3 | 2.78Ml/d) higher than last year, with circa 900,000M^3 being directly attributable to the Customer Services Data Quality Programme.

During 2016/17, as part of the ongoing Achieving Customer Excellence (ACE) programme of work. A number of projects were identified to improve the integrity and completeness of customer account configuration and subsequent billing, NIW completed the following data quality work streams:

- Sewerage Account Configuration Review
- Metering & Billing
- Void Properties with Consumption

Which resulted in the identification & enhancement of further data quality controls, improved process maps, and additional account configuration exception reports. Subsequent improvement of data quality, and retrospective correction of account configuration, resulted in a material increase in retrospective billing e.g. circa 400,000 $m^{3\ re}$ Sewerage Account Configuration Review.

This line has been allocated a confidence grade of A2 as although it has an element of manual manipulation of raw data from Rapid report the manipulation is minimal.

Line 6 - Volume Trade Effluent

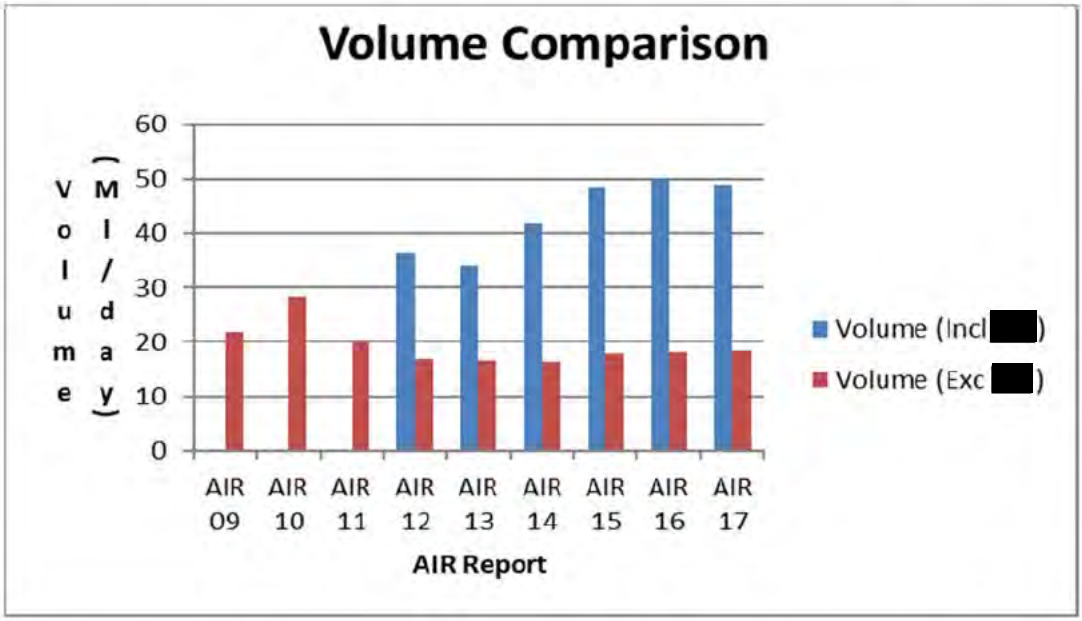
Sources

The names of individual traders were taken from Primary Source of Trade Effluent Customers (PSTEC). This database is updated by NIW on a regular basis. The chargeable volume of each trader was supplied by our Billing Section in Metered Accounts Management. Where no volumes were available, the consented volumes were used. This applied to 47 traders out of 551 assessed. The total number of traders has increased from 543 in AIR16 to 551 in AIR17.

The total volume for AIR 16 and 17 are detailed below:

- AIR 16 Volume = 49.96 Ml/day
- AIR 17 Volume = 49.00 Ml/day

In order to analyse these figures it has been decided to break them down into volumes including [redacted] and volumes without, to better identify the current trends in data.



There has been a decrease in the volume of effluent discharged from [redacted] during this period. This volume has decreased from 31.95 Ml/day to 30.76 Ml/day. This is a 1.19 Ml/day decrease. Comparing the total AIR 17 volume to the AIR 16 volume there has been an overall decrease of 0.96 Ml/day. Therefore removing the volume discharged by the [redacted] from this leaves a relatively small increase of 0.24 Ml/day, which is a result of variances in the remaining trade effluent discharges.

There were increases to the overall discharge volumes in 7 of the 10 trader type and areas. These summated to an increase of 0.69 ML/day. The table below lists those sites deemed to have the most impact:

Trader	Area	AIR 16 Vol/day (m3)	AIR 17 Vol/Day (m3)	Increase (m3)
[redacted]	S NIW S&C	2311.65	2373.02	61.37
[redacted]	S NIW S&C	139.49	202.22	62.73
[redacted]	S PPP S&C	156.69	299.42	142.73
[redacted]	NE NIW S&C	485.65	626.30	140.65
[redacted]	S PPP S&C	176.62	283.25	106.63

The reductions in the remaining 3 trader type and areas summated to a decrease of 0.46 Ml/day. Some of the more significant changes making up this reduction are detailed below:

Trader	Area	AIR 16 Vol/day (m3)	AIR 17 Vol/Day (m3)	Reduction (m3)
[redacted]	S NIW S&C	722.35	344.59	377.76
[redacted]	S NIW S&C	329.92	241.34	88.58
[redacted]	NW S&C	952.49	810.24	142.25

The net result of these changes is an overall increase of 0.23 Ml/day (difference is in the roundings). Some of the more significant changes have been highlighted above, but the fluctuations of all the trade effluent discharges contribute to the final figure.

Line 7 – Volume of Waste Water Returned

This line is a calculation of the figures from lines 3, 4, 5 and 6. The components of this calculation received confidence grades of A2, A1, B3 and B2 respectively. As B3 was the lowest confidence grade for a component, this line has been allocated a confidence grade of B3.

Line 8 – Volume of Road Drainage returned

In line with the proposed methodology, we carried out the following steps:

1. Based on information provided by Road Service, determined the surface area of all roads and footpaths in urban areas (i.e. within the 40mph speed limit) as follows:
    - Urban road surface area 39,264,486 m².
    - Urban footway surface area 17,022,987 m².
    - Total urban road & footway surface area 56,287,473 m².

2. Obtained Northern Ireland average annual rainfall data from the Met Office over the last 10 years – 1.14m.

3. Using the above, calculated the annual volume of rain falling on these surfaces and hence the run-off from roads & footpaths discharged to NIW sewers and storm drains.
    - 56,287,473 x 1.14 = 64,167,719m3 (175.80 MLD)

4. From data extracted from NIW's network information management system (NIMS) for the largest 105 urban areas in Northern Ireland (i.e. all areas with greater than 1,000 population) we determined the following:
    - Aggregate length of combined sewers = 4,378km
    - Aggregate length of stormwater sewers = 4,317 km

    Both of these figures were adjusted to allow for those stormwater sewers which –rather than discharging to a watercourse – are connected into the combined system.

    Applying the assumption that the sewer lengths represent a 'proxy' estimate of road lengths, this yields an approximate **50:50** split between areas draining to combined systems and those draining to separate systems.

5. Using points 3 and 4 the volumes of Road Drainage returned are calculated as follows:
    - Volume returned to combined sewer = 87.9 MLD
    - Volume returned to storm sewer = 87.9 MLD
    - Total Volume returned to sewer = 175.80 MLD

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 15 NON FINANCIAL MEASURES
SEWAGE TREATMENT (NIW Only)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**SEWAGE - LOADS**																				
1	Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1	3,778.6	B2	3,880.2	B2	5,322.6	B2	5,005.0	B2	4,378.9	B2								
2	Total load receiving secondary treatment (BOD/year)	tonnes	1	39,183.9	C3	39,160.6	C3	38,946.1	C3	38,977.2	C3	38,552.9	C3								
3	Total load receiving primary treatment only (BOD/year)	tonnes	1	286.6	C3	273.9	C3	210.8	C3	211.2	C3	211.0	C3								
4	Total load receiving preliminary treatment only (BOD/year)	tonnes	1	691.5	C3	634.4	C3	634.4	C3	669.9	C3	670.0	C3								
5	Total load entering sewerage system (BOD/year)	tonnes	1	40,312.8	C5	40,213.4	C5	39,929.7	C5	39,991.8	C3	39,561.2	C3								
6	Equivalent population served (resident)	000	2	1,806.82	C5	1,802.63	C5	1,789.68	C5	1,792.79	C3	1,773.11	C3								
7	Equivalent population served (resident) (numerical consents)	000	2	1,742 90	C5	1,740.19	C5	1,727.76	C5	1,731.65	C3	1,712.28	C3								
B	**SEWERAGE - SERVICE FACILITIES**																				
8	Number of sewage treatment works	nr	0	1,018	A2	1,015	A2	1,016	A2	1,015	A2	1,015	A2								
9	Treatment capacity available (BOD5/day)	tonnes	1	132.4	D3	133.4	D3	134.2	D3	134.1	D3	134.2	D3								
C	**SEWAGE - SLUDGE DISPOSAL**																				
14	Percentage unsatisfactory sludge disposal	%	2	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1								
15	Total sewage sludge produced	ttds	1	32	B2	32.491	B2	33.5	B2	33.7	B2	37 2	B2								
16	Total sewage sludge transferred to PPP	ttds	1	31.3	A2	31.7	A2	32.6	A2	32.9	A2	36.4	A2								
17	Total sewage sludge disposal by NI Water	ttds	1	0.8	B2	0.8	B2	0.9	B2	0 8	B2	0 8	B2								

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 15 NON FINANCIAL MEASURES
SEWAGE TREATMENT (PPP Only)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	SEWAGE - LOADS																				
1	Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1	1,040.6	B2	1,082 3	B2	1,117.7	B2	1,094.1	B2	1,232.3	B2								
2	Total load receiving secondary treatment (BOD/year)	tonnes	1	6,594.9	B3	7,209.1	B3	7,031.9	B3	7,153.2	B3	7,360.2	B3								
3	Total load receiving primary treatment only (BOD/year)	tonnes	1	0.0	A1	0 0	A1	0.0	A1	0.0	A1	0.0	A1								
4	Total load receiving preliminary treatment only (BOD/year)	tonnes	1	0.0	A1	0 0	A1	0.0	A1	0.0	A1	0.0	A1								
5	Total load entering sewerage system (BOD/year)	tonnes	1	6,594.9	C5	7,209.1	C5	7,031.9	B2	7,153.2	B2	7,133.2	B2								
6	Equivalent population served (resident)	000	2	301.14	B2	329.18	B3	321.09	B3	326.41	B3	325.72	B3								
7	Equivalent population served (resident) (numerical consents)	000	2	301.14	B2	329.18	B3	321.09	B3	326.41	B3	325.72	B3								
B	SEWERAGE - SERVICE FACILITIES																				
8	Number of sewage treatment works	nr	0	6	A1	6	A1	6	A1	6	A1	6	A1								
9	Treatment capacity available (BOD5/day)	tonnes	1	30.4	B3	30.4	A2	30.4	A2	30.4	A2	30.4	A2								
C	SEWAGE - SLUDGE DISPOSAL																				
14	Percentage unsatisfactory sludge disposal	%	2	0.00	A2	0.00	A1	0.00	A1	0 00	A1	0.00	A1								
15	Total sewage sludge produced	ttds	1	6.3	B2	6.4	A2	6.7	B3	5.7	B3	5 9	B3								
16	Total sewage sludge received from NI Water	ttds	1	31.3	A2	31.7	A2	32.6	A2	32.9	A2	36.4	A2								
17	Total sewage sludge disposal	ttds	1	37.6	B2	38.1	A2	39.3	B2	38.6	B2	42 3	B2								

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 15 NON FINANCIAL MEASURES
SEWAGE TREATMENT (Total)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**SEWAGE - LOADS**																				
1	Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1	4,819.2	B2	4,962 6	B2	6,440.3	B2	6,099.1	B2	5,611.2	B2								
2	Total load receiving secondary treatment (BOD/year)	tonnes	1	45,778.8	C3	46,369.7	C3	45,978.0	C3	46,130.4	C3	45,913.1	C3								
3	Total load receiving primary treatment only (BOD/year)	tonnes	1	286.6	C3	273 9	C3	210.8	C3	211.2	C3	211 0	C3								
4	Total load receiving preliminary treatment only (BOD/year)	tonnes	1	691.5	C3	634.4	C3	634.4	C3	669.9	C3	670 0	C3								
5	Total load entering sewerage system (BOD/year)	tonnes	1	46,907.7	C5	47,422 5	C5	46,961.6	C5	47,145.0	C3	46,694.4	C3								
6	Equivalent population served (resident)	000	2	2,107 96	C5	2,131.81	C5	2,110.77	C5	2,119.20	C3	2,098.83	C3								
7	Equivalent population served (resident) (numerical consents)	000	2	2,044 04	C5	2,069.37	C5	2,048.85	C5	2,058.06	C3	2,038.00	C3								
B	**SEWERAGE - SERVICE FACILITIES**																				
8	Number of sewage treatment works	nr	0	1,024	A2	1,021	A2	1,022	A2	1,021	A2	1,021	A2								
9	Treatment capacity available (BOD5/day)	tonnes	1	162.8	D3	163.8	D3	164.6	D3	164.5	D3	164.6	D3								
C	**SEWAGE - SLUDGE DISPOSAL**																				
14	Percentage unsatisfactory sludge disposal	%	2	0.00	A2	0.00	A1	0.00	A1	0.00	A1	0.00	A1								
15	Total sewage sludge produced	ttds	1	38.4	B2	38.9	A2	40.2	B2	39.4	B2	43.1	B2								
16	Not used	ttds	1																		
17	Total sewage sludge disposal	ttds	1	38.4	B3	38.9	A2	40.2	B2	39.4	B2	43.1	B2								

Table 15 - Sewage Treatment

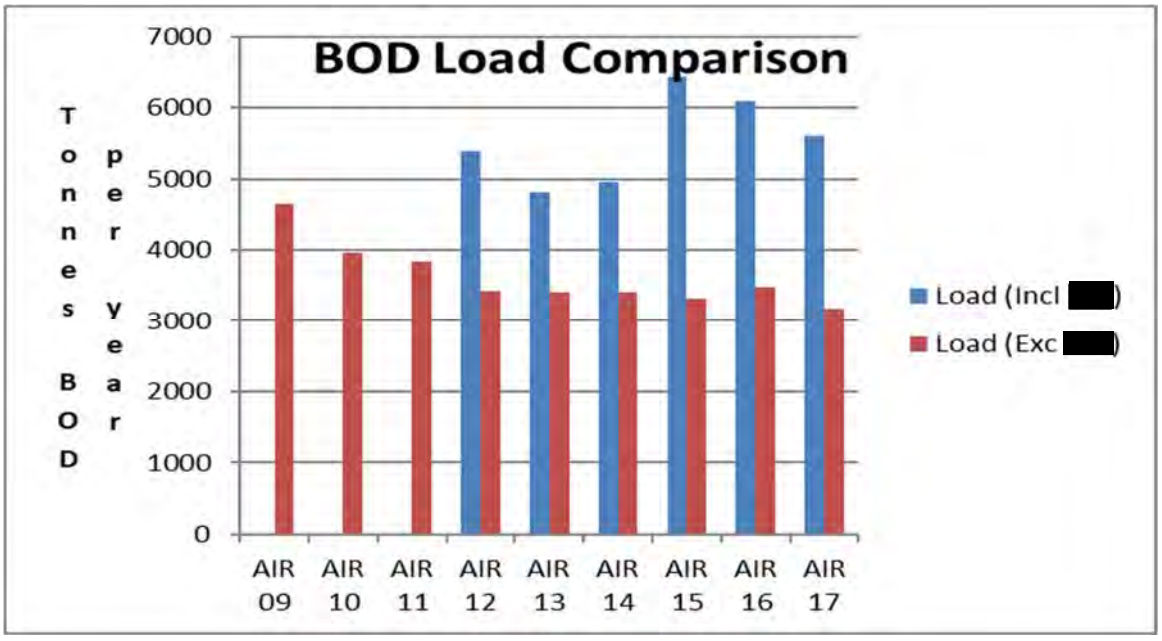
Line 1 - Trade effluent load receiving secondary treatment (BOD/year)

The names of individual traders were taken from the Primary Source of Trade Effluent Customers (PSTEC). This database is updated by NIW on a regular basis. The actual BOD strength of each sampled trader was used for the calculation of the load. For non-sampled discharges the standard sewage BOD strength was used, as detailed in the Methodology.

The loading for this year's and the previous year's reports were as follows:

AIR17 = 5611.3 tonnes BOD/year
AIR16 = 6099.1 tonnes BOD/year.

In order to analyse these figures they have been separated to show loading including [redacted] and loading excluding [redacted].



The loading from [redacted] has decreased from 2628.6 tonnes BOD/yr (AIR16) to 2432.2 tonnes BOD/yr (AIR17), which is a decrease of 196.4 tonnes BOD/yr. Overall the loading for AIR 17 decreased by 487.8 tonnes BOD/yr. With the decrease from [redacted] removed from this figure, the difference between the two reports is a decrease of 291.47 tonnes BOD/yr.

There was an increase in the BOD strength used for the standard charge traders during this period. This strength was derived from the average results of the Mogden Samples during the period 1st March 2016 to 28th February 2017. The average BOD strength of the Mogden samples increased from 175 mg/l to 195 mg/l. NI Water introduced more fixed industry strengths during the 16/17 period following an UKWIR report titled 'A review of current Trade Effluent allowances and fixed strengths'. As detailed in the methodology, the Fixed Strength COD's were then converted to a BOD strength. The strengths in the report are detailed below:

Industry Type	Settled COD (mg/l)	BOD (mg/l)
Vehicle Wash (Jet)	517	361.54
Vehicle Wash (Roller)	108	75.52
Industrial Laundry	722	504.90

Industry Type	Settled COD (mg/l)	BOD (mg/l)
Swimming Pool Filter Backwash	36	25.17
Small Brewery	2648	1851.75
Cattlemarts	1404	981.82
Wheelie Bin Cleaners	406	283.92
Launderettes	478	334.27

There were increases in loading in NE, NW and South PPP Sampled and Charged traders, as well as NW, NE, South and South PPP Standard charge traders. These equated to an increase in loading of 255.21 Tonnes BOD/year. Some examples of these increases to loadings are:

Trader	Area	AIR 16 Tonnes BOD/yr	AIR 17 Tonnes BOD/yr	Increase(tonnes BOD/yr)
[redacted]	South PPP S&C	21.18	83.82	62.64
[redacted]	NE NIW S&C	1.28	49.54	48.26
[redacted]	South PPP S&C	323.07	365.29	42.22
[redacted]	South NIW S&C	81.58	119.72	38.14
[redacted]	South PPP S7C	81.14	114.66	33.51

There were reductions in loadings reported in NE PPP and the South sampled and charged traders, as well as the NE Standard charge traders. The total of these reductions was 546.68 tonnes BOD / year and included:

Trader	Area	AIR 16 Tonnes BOD/yr	AIR 17 Tonnes BOD/yr	Reduction (tonnes BOD /yr)
[redacted]	South NIW S&C	789.38	442.30	347.08
[redacted]	NE PPP S&C	232.16	146.95	85.21
[redacted]	South NIW S&C	115.08	41.62	73.46
[redacted]	NW NIW S&C	110.38	68.12	42.26

The net of these changes equates to the 159.9 tonnes BOD/yr reduction in the AIR loadings with the [redacted] figures excluded.

On reviewing the background spreadsheet for the trade effluent AIR data, an error was identified in the fixed strengths used for 29 swimming pool backwash strengths, 1 small brewery and 4 fish processors. Substituting the correct strengths for these sites reduces the associated tonnes BOD /year from 4.15 to 3.06. This difference of 1.09 tonnes BOD/yr is 0.02% of the total AIR 17 loading and has been deemed insignificant. These strengths will be updated in the AIR 18 report.

In summary, there has been a decrease in both the loading from [redacted] and the loading from the remaining trade effluent discharges.

Line 2 - 7 – Sewage loads

NIW Only

It should be noted that the banding of the WWTWs for this table is on the same basis as that used for Table 17c. It is based on the latest set of Populations Equivalents minus the allowance for the tourist population. Since AIR16, PEs for 98 WWTWs have been updated.

The allowance for the tourist population, which has been deducted for the purposes of band size determination, has been the proportion of PE allocated to hotels, and caravan and tent

pitches only. No deduction has been made for commuters as such information has not been captured.

The loads reported in this table are the sums of the loads received by each WWTWs or outfall in each particular category, and hence include the proportion of PE allocated to hotels, and caravan and tent pitches therefore loads reported in this table include the non-resident population. The method for computing loads from NIW only WWTWs is the same as was implemented for AIR16, there has been no inclusion of re-circulated sludge/sludge liquors in the loads reported.

Trade effluent information was obtained from NIW's Trade Effluent Section, for each individual consented trader, which enabled easy conversion to PEs. The COD: BOD conversion factor of 2:1 was not used as more accurate flow based information was available to the Trade Effluent Section.

The Water and Sewerage Services (NI) Order 2006 designated that the discharge from hospitals, nursing homes & clinics should no longer be considered as Trade Effluent, therefore for AIR17 these have been removed from the Trade Effluent Submission. For the majority of hospitals a certain % of hospital discharges has been included due to discharges from x-ray departments and bathing pools. The AIR11 Trade Information, for nursing homes and clinics, has been maintained for AIR17 in order to allow for this proportion of the influent entering the WWTWs. Similarly, the PEs for the hospitals has been factored up to 100% of their total discharge to give a more accurate figure of load discharging to the sewerage network.

In AIR13, it was reported that flow & load information was validated for Belfast and a figure of 365,000Pe was agreed. This figure has been updated for AIR17 with the latest trade information giving a new figure of 360,602 PE. However it should be noted that there are a number of projects currently been carried out for NIW that are investigating the PEs discharging to Belfast and early indications would suggest the equivalent PE discharging to the WWTWs is much higher than currently stated. The main projects involved are:

- Belfast WwTW Appraisal Study (which includes a full 12 month flow and load study). The study is due to be completed in the Spring of 2018 ,
- Glenmachan Sewers Project, and
- Compliance with the Surface Water (Shellfish) Regs (NI) – Belfast Lough.

The outcomes of these projects are likely to influence the PE for Belfast for AIR18 but a full flow and load assessment may not be completed and accepted by NIEA until AIR19.

NIW has information pertaining to septic tank imports to its WWTWs. In summary of the 17 WWTWs that are septic tank import centres five receive the sludge at the head of the inlet works and the remaining 12 receive it via sludge reception centres. It should be noted that the 5 works which receive sludge imports at the head of the works has increased by 1 from AIR16. The additional works is Downpatrick and is due to operational issues with the import screen during the year. The screen was out of service during the AIR17 reporting period, requiring the sludge to be discharged at the head of the works. There are no facilities to measure the import through the works. The Sludge Management Section has indicated sludge imports continued as normal at Downpatrick and that an average monthly return would be an acceptable way of estimating the volume. The monthly average of imports received at Downpatrick for AIR16 has been used to estimate the volume received for AIR17 while the screen was out of service. The monthly average for AIR16 is 455.8m3 which equates to 208PE. The screen was out of service between August – March with an import PE of 1664 returned.

For AIR17 conversion factors received from our scientific staff were used to convert the septic tank imports to PEs for the 5 WWTWs where imports are discharged directly to the inlet works.

Allowance at the other 12 WWTWs is not being made as there is no way of computing the PE of the supernatant return as a result of the septic tank imports.

The WWTWs where the septic tank imports was discharged at the head of the works were Downpatrick, Belfast, Glenstall, Limavady and Lisburn (New Holland). A conversion was used to get an equivalent PE which was adopted for these sites for AIR13.

An assumption of 1% dry solids was made for Suspended Solid (SS) loading and an equivalent PE based on 60g of SS solids per PE was used

			PE Calculation			
NIW CAR Name	**Site Car Id**	**Total Volume m3/Yr**	**Total Volume m3/day**	**SS Loading (Assume 1% Dry Solids) m3/day**	**SS Loading kg/day**	**PE (SS/0.06)**
Downpatrick	771	3646.4	9.99	0.1	99.9	1664
Belfast	345	3918.6	10.74	0.11	107.36	1789
Glenstall	1109	6949.6	19.04	0.19	190.4	3173
Limavady	3162	34.1	0.09	0.0	0.93	16
Lisburn (New Holland)	329	6956.9	19.06	0.19	190.6	3177

NIW has also information pertaining to Sludge Imports to its WWTWs however due to the fact that the supernatant return is metered at only a small number of WWTWs, it would appear that these meters require verification and perhaps calibration. No allowance is being made for PE resulting from sludge imports at these works.

The Reporters Report on AIR09 recommended that NIW correct possible overestimation of total WWTW loads due to the inclusion of offices/commercial premises. The majority of the residential and non-residential element of PEs used to calculate tables 17c and 17d was based on Pointer information from MapInfo. However it should be noted that the non-residential element of Pointer is made up of both commercial and unknown properties. At this present time it is not known what proportion of the unknowns are actually residential and which are non-residential and therefore it has been decided to include both elements when calculating the PEs for the band sizes. It is difficult to estimate the proportion of load at a WWTW due to commuters, or the load which should be deducted from/added to a particular WWTW due to population commuting out of/into the catchments. Hence no allowance to WWTWs loads has been made either way for Table 17d.

The table below gives a breakdown of the total load received by the company in tonnes of BOD per annum, by each component used to build up the reported data. Please note the total equates to Line 5 (minor discrepancy due to rounding up of fractions).

Components used in build-up of Total Load	**Total PE**	**Tonnes of BOD per annum**
Residential	1,246,427	27,296.74
Non-Residential	225,042	4,928.42
Hotels	3,761	82.37

Components used in build-up of Total Load	Total PE	Tonnes of BOD per annum
Nursery School	1073	23.5
Playschool	1,037	22.71
Primary School	27,452	601.20
Secondary School	24564	537.95
Trade PE	99,311	2,174.9
Large (>7500m3) Consumers	120930	2648.37
Caravan Parks	29577	647.74
Sludge Import / Export / Supernatant (Sludge Import to Inlet of Works – to 4 WWTWs 8155 PE)	27,272	597.26
Total (Line 5)	**1,806,446**	**39,561.16**

Confidence Grades

The confidence grades of the data in lines 2 - 4 remain as C3.

The Reporter recommended in AIR14 and in AIR15 (Recommendation No 28/Reporter's Report Reference Table 15 Lines 2-9 S7) that NI Water consider increasing the confidence grades for lines 5 – 7 from C5 to C3. Following discussions with the Reporter, the confidence grades for these lines in AIR16 have been amended to reflect this recommendation.

The confidence grades of the data in lines 8 and 9 remain as in AIR15, due to the confidence in the other information associated with the population of these lines.

Line 2 - Total load receiving secondary treatment

The table below shows the changes in WWTWs receiving secondary treatment since AIR16 for Line 2. NB. Change in PE (-Ve AIR17 PE Higher).

Name of Works	CAR ID	PE Change	Comments
Annsborough	S02687	-3	PE updated with AIR17 Trade Information
Antrim (WWTW)	S01422	620	PE updated with AIR17 Trade Information
Ardgarvan	S02987	-13	A population study was carried out for this site and reviewed and adopted for AIR17.
Ardglass (WWTW)	S00268	-110	PE updated with AIR17 Trade Information
Augher WWTW	S03005	-12	Actual PE updated following an On-Site check by APT.
Ballyclare	S01467	114	PE updated with AIR17 Trade Information
Ballykelly (L/Derry)	S03016	18	PE updated with AIR17 Trade Information
Ballykinler (WWTW)	S00299	17	Trade PE update for AIR17
Ballymena (WWTW)	S01456	-1033	PE updated with AIR17 Trade Information
Ballynahinch (Down)	S00311	6	PE updated with AIR17 Trade Information
Banbridge (WWTW)	S02102	1020	PE updated with AIR17 Trade Information and

Name of Works	CAR ID	PE Change	Comments
Bar Hall	S00229	5	A population study was carried out for this site and reviewed and adopted for AIR17.
Belfast (WWTW)	S00345	3781	PE updated with AIR17 Trade & Sludge Import Information
Bohulkin	S03029	2	A population study was carried out for this site and reviewed and adopted for AIR17.
Bushmills WWTW	S01178	-1	PE updated with AIR17 Trade Information
Carrickfergus (WWTW)	S00261	202	PE updated with AIR17 Trade Information
Castlederg (WWTW)	S03042	6	PE updated with AIR17 Trade Information
Cladymore	S02566	16	A population study was carried out for this site and reviewed and adopted for AIR17.
Coalisland	S02828	-33	PE updated with AIR17 Trade Information
Coneyisland	S00274	3	A population study was carried out for this site and reviewed and adopted for AIR17.
Cookstown (WWTW)	S01582	-243	PE updated with AIR17 Trade Information
Corry	S03063	6	A population study was carried out for this site and reviewed and adopted for AIR17.
Culmore (WWTW)	S03071	332	PE updated with AIR17 Trade Information
Derryhale	S02570	-14	PE updated with AIR17 Trade Information
Dervock	S01102	-1	PE updated with AIR17 Trade Information
Donaghey (2)	S01569	1	A population study was carried out for this site and reviewed and adopted for AIR17.
Donaghmore (WWTW)	S02840	-2	PE updated with AIR17 Trade Information
Donemana	S03103	-13	PE updated with AIR17 Trade Information
Donnybrewer	S03080	-185	PE updated with AIR17 Trade Information
Dougan Place	S02164	7	A population study was carried out for this site and reviewed and adopted for AIR17.
Downpatrick (WWTW)	S00771	-2134	PE updated with AIR17 Trade & Sludge Import Information
Draperstown	S01615	-2	PE updated with AIR17 Trade Information
Dromara	S00316	-4	PE updated with AIR17 Trade Information
Dromore (Down)	S02127	-113	PE updated with AIR17 Trade Information
Dundrod	S00326	-1	A population study was carried out for this site and reviewed and adopted for AIR17.
Dundrum (Down)	S00297	-568	A population study was carried out for this site and reviewed and adopted for AIR17.
Dungannon	S02850	15171	PE updated with AIR17 Trade Information
Dungiven	S03101	-15	PE updated with AIR17 Trade Information
Dunmurry	S00346	201	PE updated with AIR17 Trade Information
Edenreagh Road(39-41)	S04094	-18	A population study was carried out for this site and reviewed and adopted for AIR17.
Enniskillen	S03218	-1495	PE updated with AIR17 Trade Information
Ervey Road	S03107	-1	A population study was carried out for this site and reviewed and adopted for AIR17.

Name of Works	CAR ID	PE Change	Comments
Fivemiletown (WWTW)	S03113	-30	PE updated with AIR17 Trade Information
Glenstall	S01109	-187	PE updated with AIR17 Trade Information
Gortaclady	S01575	-26	A population study was carried out for this site and reviewed and adopted for AIR17.
Greenisland (WWTW)	S00263	341	PE updated with AIR17 Trade Information
Greysteel (WWTW)	S03123	-5	PE updated with AIR17 Trade Information
Hilltown (WWTW)	S02701	-30	PE updated with AIR17 Trade Information
Irvinestown	S03137	-5	PE updated with AIR17 Trade Information
Keady (Armagh)	S02553	20	PE updated with AIR17 Trade Information
Kesh (WWTW)	S03140	-3	PE updated with AIR17 Trade Information
Kilkeel (WWTW)	S00313	-1352	PE updated with AIR17 Trade Information
Killeter	S03144	-19	A population study was carried out for this site and reviewed and adopted for AIR17.
Killinchy (WWTW)	S00252	-578	PE updated with AIR17 Trade Information
Killygonlan (WWTW)	S02043	-10	PE updated with AIR17 Trade Information
Kilrea	S01156	-108	PE updated with AIR17 Trade Information
Kiltubbrid	S02044	10	A population study was carried out for this site and reviewed and adopted for AIR17.
Larne (WWTW)	S02044	-69	PE updated with AIR17 Trade Information
Legatirriff	S02430	-1	A population study was carried out for this site and reviewed and adopted for AIR17.
Limavady (WWTW)	S03162	52	PE updated with AIR17 Trade Information
Lisburn (New Holland)	S00329	-98	PE updated with AIR17 Trade Information
Lisnaskea (WWTW)	S03171	-101	PE updated with AIR17 Trade Information
Maghera (L/Derry)	S01629	-172	PE updated with AIR17 Trade Information
Magherafelt (WWTW)	S01621	-644	PE updated with AIR17 Trade Information
Magheramourne	S01464	10	A population study was carried out for this site and reviewed and adopted for AIR17
Marlacoo Road	S02149	2	A population study was carried out for this site and reviewed and adopted for AIR17
Moneyglass	S01589	19	A population study was carried out for this site and reviewed and adopted for AIR17
Moneymore (WWTW)	S01589	-7	PE updated with AIR17 Trade Information
Moneyreagh	S00337	-3	PE updated with AIR17 Trade Information
Mossvale Terrace	S02153	6	A population study was carried out for this site and reviewed and adopted for AIR17
Mountjoy (Dungannon)	S02849	-1	PE updated with AIR17 Trade Information

Name of Works	CAR ID	PE Change	Comments
Moy (WWTW)	S02859	-215	PE updated with AIR17 Trade Information
Mullyroddan	S02851	1	A population study was carried out for this site and reviewed and adopted for AIR17
Newcastle (WWTW)	S00303	8	PE updated with AIR17 Trade Information
Newmills WWTW	S02852	-1	PE updated with AIR17 Trade Information
Newry (WWTW)	S02685	5594	PE updated with AIR17 Trade Information
Newtownbreda (WWTW)	S00342	-7	PE updated with AIR17 Trade Information
Newtownbutler WWTW	S03200	-3	PE updated with AIR17 Trade Information
North Coast (WWTWs)	S04150	678	PE updated with AIR17 Trade Information
Omagh (WWTW)	S03999	422	PE updated with AIR17 Trade Information
Portglenone WWTW	S01449	-12	Rationalistion of Riverside (16-20) to Portglenone WwTW
Riverside (16-20)	S02029	12	Rationalistion of Riverside (16-20) to Portglenone WwTW
Rosscor	S03212	7	A population study was carried out for this site and reviewed and adopted for AIR17
Roughfort (WWTW)	S01470	4	PE updated with AIR17 Trade Information
Seahill	S00774	2	PE updated with AIR17 Trade Information
Strabane	S03223	-639	PE updated with AIR17 Trade Information
Swatragh WWTW	S01637	8	PE updated with AIR17 Trade Information
Tamlaght WWTW	S03224	-2	A population study was carried out for this site and reviewed and adopted for AIR17
Tandragee	S02174	1029	PE updated with AIR17 Trade Information
The Loup WWTW	S01588	-16	A population study was carried out for this site and reviewed and adopted for AIR17
Warrenpoint (WWTW)	S02720	-12	PE updated with AIR17 Trade Information
Whitehouse	S00265	-12	PE updated with AIR17 Trade Information
	Total	19371	**Change in Line 2 PE since AIR16**

The change in PE equates to an increase in load of 424.20t BOD/yr (i.e. 19,371 x 60 for 60g/hd/day /1000/1000 x 365) from AIR16 to AIR17.

Difference between AIR17 and AIR16 values (to 2 decimal places) :

Line 2 for AIR16 -	**38,977.16**
Line 2 for AIR 17 -	**38552.90**
Total Difference -	**424.26**

Note – The difference in the above totals are due to rounding of values.

Line 3 - Total load receiving primary treatment only

The table below shows the changes in WWTWs receiving primary treatment only since AIR15 for Line 3. NB. Change in PE (-Ve AIR17 PE Higher).

Name of Works	CAR ID	PE Change	Comments
Ballylumford Cottages	S00260	7	A population study was carried out for this site and reviewed and adopted for AIR17
Drumneechy	S03097	4	A population study was carried out for this site and reviewed and adopted for AIR17
Hollybank Road(54)	S01775	1	A population study was carried out for this site and reviewed and adopted for AIR17
	Total	12	**Change in Line 3 PE since AIR16**

The change in PE equates to an increase in load of 0.26t BOD/yr (i.e. 12 x 60 for 60g/hd/day /1000/1000 x 365) from AIR16 to AIR17, allowing for rounding up and down and conversions.

Difference between AIR17 and AIR16:

Line 3 for AIR16 -	**211.21**
Line 3 for AIR 17 -	**211.01**
Total Difference -	**0.20**

Note – The difference in the above totals are due to rounding of values

Line 4 - Total load receiving preliminary treatment only

Although the table below would indicate a slight change, there are no changes in PEs for WwTWs receiving preliminary during AIR17 reporting period, with the slight change due to rounding up in the Master List of AIR17 Info spreadsheet.

Difference between AIR17 and AIR16:

Line 4 for AIR16 -	**669.94**
Line 4 for AIR 17 -	**669.96**
Total Difference -	**0.02**

Line 5 - Total load entering sewerage system

The table below shows the changes in WWTWs since AIR16 that affects load entering the system for Line 5. NB. Change in PE (-Ve AIR17 PE Higher).

Name of Works	CAR ID	PE Change	Comments
Annahilt	S00317	1	Change due to rounding or rounding down
Annalong	S00300	30	PE updated with AIR17 Trade Information
Annsborough	S02687	-3	PE updated with AIR17 Trade Information

Name of Works	CAR ID	PE Change	Comments
Antrim (WWTW)	S01422	620	PE updated with AIR17 Trade Information
Ardgarvan	S02987	-13	A population study was carried out for this site and reviewed and adopted for AIR17
Ardglass (WWTW)	S00268	-109	PE updated with AIR17 Trade Information
Augher WWTW	S03005	-12	PE updated with AIR17 Trade Information
Ballyclare	S01467	114	PE updated with AIR17 Trade Information
Ballykelly (L/Derry)	S03016	18	PE updated with AIR17 Trade Information
Ballykinler (WWTW)	S00299	17	Trade PE update for AIR17
Ballylumford Cottages WWTW	S00260	7	A population study was carried out for this site and reviewed and adopted for AIR17
Ballymena (WWTW)	S01456	-1033	PE updated with AIR17 Trade Information
Ballynahinch (Down)	S00311	6	PE updated with AIR17 Trade Information
Banbridge (WWTW)	S02102	1020	PE updated with AIR17 Trade Information
Bar Hall	S00229	5	A population study was carried out for this site and reviewed and adopted for AIR17
Belfast (WWTW)	S00345	3781	PE updated with AIR17 Trade Information
Blackrock Retention Tank(Down)	S00306	249	Rationalisation of flows to Kilkeel WwTW
Bolhulkin	S03029	2	A population study was carried out for this site and reviewed and adopted for AIR17
Bushmills WWTW	S01178	-1	PE updated with AIR17 Trade Information
Carrickfergus (WWTW)	S00261	202	PE updated with AIR17 Trade Information
Castlederg (WWTW)	S03042	6	PE updated with AIR17 Trade Information
Cladymore	S02566	16	PE updated with AIR17 Trade Information
Coalisland	S02828	-33	PE updated with AIR17 Trade Information

Name of Works	CAR ID	PE Change	Comments
Coneyisland	S00274	3	A population study was carried out for this site and reviewed and adopted for AIR17.
Cookstown (WWTW)	S01582	-243	PE updated with AIR17 Trade Information
Corry	S03063	6	A population study was carried out for this site and reviewed and adopted for AIR17
Culmore (WWTW)	S03071	332	PE updated with AIR17 Trade Information
Derryhale	S02570	-14	PE updated with AIR17 Trade Information
Dervock	S01102	-1	PE updated with AIR17 Trade Information
Donaghey (2)	S01569	1	A population study was carried out for this site and reviewed and adopted for AIR17
Donaghmore (WWTW)	S02840	-2	PE updated with AIR17 Trade Information
Donemana	S03103	-13	PE updated with AIR17 Trade Information
Donnybrewer	S03080	-185	PE updated with AIR17 Trade Information
Dougan Place	S02164	7	A population study was carried out for this site and reviewed and adopted for AIR17
Downpatrick (WWTW)	S00771	-2134	PE updated with AIR17 Trade Information
Draperstown	S01615	-2	PE updated with AIR17 Trade Information
Dromara	S00316	-4	PE updated with AIR17 Trade Information
Dromore (Down)	S02127	-113	PE updated with AIR17 Trade Information
Drumneechy	S03097	4	A population study was carried out for this site and reviewed and adopted for AIR17
Dundrod	S00326	-1	A population study was carried out for this site and reviewed and adopted for AIR17.
Dundrum(down)	S00297	-569	A population study was carried out for this site and reviewed and adopted for AIR17.

Name of Works	CAR ID	PE Change	Comments
Dungannon	S02850	15171	PE updated with AIR17 Trade Information
Dungiven	S03101	-15	PE updated with AIR17 Trade Information
Dunmurry	S00346	201	PE updated with AIR17 Trade Information
Edenreagh Road(39-41)	S04094	-18	A population study was carried out for this site and reviewed and adopted for AIR17.
Enniskillen	S03218	-1496	PE updated with AIR17 Trade Information
Ervey Road	S03107	-1	A population study was carried out for this site and reviewed and adopted for AIR17.
Fivemiletown (WWTW)	S03113	-30	PE updated with AIR17 Trade Information
Glenstall	S01109	-187	PE updated with AIR17 Trade Information
Gortaclady	S01575	-26	A population study was carried out for this site and reviewed and adopted for AIR17.
Greenisland (WWTW)	S00263	341	PE updated with AIR17 Trade Information
Greysteel (WWTW)	S03123	-5	PE updated with AIR17 Trade Information
Hilltown (WWTW)	S02701	-30	PE updated with AIR17 Trade Information
Hollybank Road(54)	S01775	1	A population study was carried out for this site and reviewed and adopted for AIR17.
Irvinestown	S03137	-5	PE updated with AIR17 Trade Information
Keady (Armagh)	S02553	20	PE updated with AIR17 Trade Information
Kesh (WWTW)	S03140	-3	PE updated with AIR17 Trade Information
Kilkeel (WWTW)	S00313	-1351	PE updated with AIR17 Trade Information
Killeter	S03144	-19	A population study was carried out for this site and reviewed and adopted for AIR17.
Killinchy (WWTW)	S00252	-578	PE updated with AIR17 Trade Information
Killygonlan (WWTW)	S02043	-10	PE updated with AIR17 Trade Information

Name of Works	CAR ID	PE Change	Comments
Kilrea	S01156	-108	PE updated with AIR17 Trade Information
Kiltubbrid	S01776	10	A population study was carried out for this site and reviewed and adopted for AIR17.
Larne (WWTW)	S02044	-69	PE updated with AIR17 Trade Information
Legatirriff	S02430	-1	A population study was carried out for this site and reviewed and adopted for AIR17.
Limavady (WWTW)	S03162	52	PE updated with AIR17 Trade Information
Limestone (1)	S03164	-3	
Lisburn (New Holland)	S00329	-98	PE updated with AIR17 Trade Information
Lisnaskea (WWTW)	S03171	-102	PE updated with AIR17 Trade Information
Maghera (L/Derry)	S01629	-171	PE updated with AIR17 Trade Information
Magherafelt (WWTW)	S01621	-644	PE updated with AIR17 Trade Information
Magheramourne	S01464	10	A population study was carried out for this site and reviewed and adopted for AIR17
Marlacoo Rd	S02149	2	A population study was carried out for this site and reviewed and adopted for AIR17
Moneyglass	S01423	19	A population study was carried out for this site and reviewed and adopted for AIR17
Moneymore (WWTW)	S01589	-7	PE updated with AIR17 Trade Information
Moneyreagh	S01589	-3	PE updated with AIR17 Trade Information
Mossvale Terrace	S02153	6	A population study was carried out for this site and reviewed and adopted for AIR17
Mountjoy (Dungannon)	S02849	-1	PE updated with AIR17 Trade Information
Moy (WWTW)	S02859	-215	PE updated with AIR17 Trade Information
Mullyroddan	S02851	1	A population study was carried out for this site and reviewed and adopted for AIR17

Name of Works	CAR ID	PE Change	Comments
Newcastle (WWTW)	S00303	8	PE updated with AIR17 Trade Information
Newmills WWTW	S02852	-1	PE updated with AIR17 Trade Information
Newry (WWTW)	S02685	5594	PE updated with AIR17 Trade Information
Newtownbreda (WWTW)	S00342	-7	PE updated with AIR17 Trade Information
Newtownbutler WWTW	S03200	-3	PE updated with AIR17 Trade Information
North Coast (WWTWs)	S04150	678	PE updated with AIR17 Trade Information
Omagh (WWTW)	S03999	422	PE updated with AIR17 Trade Information
Portglenone WWTW	S01449	-12	Rationalistion of Riverside (16-20) to Portglenone WwTW
Riverside (16-20)	S0209	12	Rationalistion of Riverside (16-20) to Portglenone WwTW
Rosscor	S03212	7	A population study was carried out for this site and reviewed and adopted for AIR17
Roughfort (WWTW)	S01470	4	PE updated with AIR17 Trade Information
Seahill	S00774	1	PE updated with AIR17 Trade Information
Strabane	S03223	-638	PE updated with AIR17 Trade Information
Swatragh WWTW	S01637	9	PE updated with AIR17 Trade Information
Tamlaght WWTW	S03224	-2	PE updated with AIR17 Trade Information
Tandragee	S02174	1029	PE updated with AIR17 Trade Information
The Loup WWTW	S01588	-16	A population study was carried out for this site and reviewed and adopted for AIR17
Tully Rd Headworks	S03975	-1	Change due to rounding or rounding down
Warrenpoint	S02720	-12	PE updated with AIR17 Trade Information
Whitehouse	S00265	-12	PE updated with AIR17 Trade Information
	Total	19660	**Change in Line 5 PE since AIR16**

The change in Pe equates to an increase in load of 430.55 t BOD/yr (i.e. 19,660 x 60 for 60g/hd/day /1000/1000 x 365) from AIR16 to AIR17, allowing for rounding up and down and conversions.

Difference between AIR17 and AIR16:

Line 5 for AIR16 -	**39991.76**
Line 5 for AIR 17 -	**39561.21**
Total Difference -	**430.55**

Note – The difference in the above totals are due to rounding of values

Line 6 - Equivalent population served (resident)

The table below shows the changes in WWTWs since AIR16 that affects equivalent population served (resident) for Line 6.

Name of Works	CAR ID	PE Change	Comments
Annahilt	S00317	1	Change due to rounding or rounding down
Annalong (WWTW)	S00300	30	PE updated with AIR17 Trade Information
Annsborough	S02687	-3	PE updated with AIR17 Trade Information
Antrim	S01422	620	PE updated with AIR17 Trade Information
Ardgarvan WWTW	S02987	-13	A population study was carried out for this site and reviewed and adopted for AIR17.
Ardglass	S00268	-109	PE updated with AIR17 Trade Information
Augher	S03005	-12	PE updated with AIR17 Trade Information
Ballyclare	S01467	114	PE updated with AIR17 Trade Information
Ballykelly (L/Derry)	S03016	18	PE updated with AIR17 Trade Information
Ballykinler (WWTW)	S00299	17	Trade PE update for AIR17
Ballylumford Cottages WWTW	S00260	7	A population study was carried out for this site and reviewed and adopted for AIR17.
Ballymena (WWTW)	S01456	-1033	PE updated with AIR17 Trade Information
Ballynahinch (Down)	S00311	6	PE updated with AIR17 Trade Information
Banbridge (WWTW)	S02102	1020	PE updated with AIR17 Trade Information
Bar Hall	S00229	5	A population study was carried out for this site and reviewed and adopted for AIR17.

Name of Works	CAR ID	PE Change	Comments
Belfast (WWTW)	S00345	3781	PE updated with AIR17 Trade Information
Blackrock Retention Tank (Down)	S00311	249	Rationalisation of flows to Kilkeel WwTW
Bohulkin	S03029	2	A population study was carried out for this site and reviewed and adopted for AIR17.
Bushmills WWTW	S01137	-1	PE updated with AIR17 Trade Information
Carrickfergus (WWTW)	S00261	202	PE updated with AIR17 Trade Information
Castlederg (WWTW)	S03042	6	PE updated with AIR17 Trade Information
Cladymore	S02566	16	PE updated with AIR17 Trade Information
Coalisland	S02828	-33	PE updated with AIR17 Trade Information
Coneyisland	S00274	3	A population study was carried out for this site and reviewed and adopted for AIR17.
Cookstown (WWTW)	S01582	-243	PE updated with AIR17 Trade Information
Corry	S03063	6	A population study was carried out for this site and reviewed and adopted for AIR17.
Culmore (WWTW)	S03071	332	PE updated with AIR17 Trade Information
Derryhale	S02570	-14	PE updated with AIR17 Trade Information
Dervock	S01102	-1	PE updated with AIR17 Trade Information
Donaghey(2)	S01569	1	A population study was carried out for this site and reviewed and adopted for AIR17.
Donaghmore (WWTW)	S02840	-2	PE updated with AIR17 Trade Information
Donemana	S03103	-13	PE updated with AIR17 Trade Information
Donnybrewer	S03080	-185	PE updated with AIR17 Trade Information
Dougan Place	S02164	7	A population study was carried out for this site and reviewed and adopted for AIR17.
Downpatrick (WWTW)	S00771	-2134	PE updated with AIR17 Trade Information
Draperstown	S01615	-2	PE updated with AIR17 Trade Information

Name of Works	CAR ID	PE Change	Comments
Dromara	S00316	-4	PE updated with AIR17 Trade Information
Dromore (Down)	S02127	-113	PE updated with AIR17 Trade Information
Drumneechy	S03097	4	A population study was carried out for this site and reviewed and adopted for AIR17.
Dundrod	S00326	-1	A population study was carried out for this site and reviewed and adopted for AIR17.
Dundrum	S00297	-569	A population study was carried out for this site and reviewed and adopted for AIR17.
Dungannon	S02850	15171	PE updated with AIR17 Trade Information
Dungiven	S03101	-15	PE updated with AIR17 Trade Information
Dunmurry	S00346	201	PE updated with AIR17 Trade Information
Edenreagh Rd(39-41)	S04094	-18	A population study was carried out for this site and reviewed and adopted for AIR17.
Enniskillen	S03218	-1496	PE updated with AIR17 Trade Information
Ervey Rd	S03107	-1	A population study was carried out for this site and reviewed and adopted for AIR17.
Fivemiletown (WWTW)	S03113	-30	PE updated with AIR17 Trade Information
Glenstall	S01109	-187	PE updated with AIR17 Trade Information
Gortaclady	S01575	-26	A population study was carried out for this site and reviewed and adopted for AIR17.
Greenisland (WWTW)	S00263	341	PE updated with AIR17 Trade Information
Greysteel (WWTW)	S03123	-5	PE updated with AIR17 Trade Information
Hilltown (WWTW)	S02701	-30	PE updated with AIR17 Trade Information
Holybank Rd(54)	S01775	1	A population study was carried out for this site and reviewed and adopted for AIR17.
Irvinestown	S03137	-5	PE updated with AIR17 Trade Information
Keady (Armagh)	S02553	20	PE updated with AIR17 Trade Information
Kesh (WWTW)	S03140	-3	PE updated with AIR7 Trade Information

Name of Works	CAR ID	PE Change	Comments
Kilkeel (WWTW)	S00313	-1351	PE updated with AIR17 Trade Information. Rationalisation of flows to Kilkeel WwTW
Killeter	S03144	-19	A population study was carried out for this site and reviewed and adopted for AIR17.
Killinchy (WWTW)	S00252	-578	PE updated with AIR17 Trade Information
Killygonlan (WWTW)	S02043	-10	PE updated with AIR17 Trade Information
Kilrea	S01156	-108	PE updated with AIR17 Trade Information
Kiltubbrid	S01776	10	A population study was carried out for this site and reviewed and adopted for AIR17.
Larne (WWTW)	S02044	-69	PE updated with AIR17 Trade Information
Legatirriff	S02430	-1	A population study was carried out for this site and reviewed and adopted for AIR17.
Limavady (WWTW)	S03162	52	PE updated with AIR17 Trade Information
Limestone(1)	S03164	-3	Reinstated as NIW is still responsible for consent
Lisburn (New Holland)	S00329	-98	PE updated with AIR17 Trade Information
Lisnaskea (WWTW)	S03171	-102	PE updated with AIR17 Trade Information
Maghera (L/Derry)	S01629	-171	PE updated with AIR17 Trade Information
Magherafelt (WWTW)	S01621	-644	PE updated with AIR17 Trade Information
Magheramourne	S01464	10	A population study was carried out for this site and reviewed and adopted for AIR17
Marlacoo Rd	S02149	2	A population study was carried out for this site and reviewed and adopted for AIR17
Moneyglass	S01423	19	A population study was carried out for this site and reviewed and adopted for AIR17
Moneymore (WWTW)	S01589	-7	PE updated with AIR17 Trade Information
Moneyreagh	S00337	-3	PE updated with AIR17 Trade Information
Mossvale Terrace	S02153	6	A population study was carried out for this site and reviewed and adopted for AIR17

Name of Works	CAR ID	PE Change	Comments
Mountjoy (Dungannon)	S02849	-1	PE updated with AIR17 Trade Information
Moy (WWTW)	S02859	-215	PE updated with AIR17 Trade Information
Mullyroddan	S02851	1	A population study was carried out for this site and reviewed and adopted for AIR17
Newcastle (WWTW)	S00303	8	PE updated with AIR17 Trade Information
Newmills WWTW	S02852	-1	PE updated with AIR17 Trade Information
Newry (WWTW)	S02685	5594	PE updated with AIR17 Trade Information
Newtownbreda (WWTW)	S00342	-7	PE updated with AIR17 Trade Information.
Newtownbutler WWTW	S03200	-3	PE updated with AIR17 Trade Information
North Coast (WWTWs)	S04150	678	PE updated with AIR17 Trade Information
Omagh (WWTW)	S03999	422	PE updated with AIR17 Trade Information
Portglenone	S01449	-12	Rationalistion of Riverside (16-20) to Portglenone WwTW
Riverside(16-20)	S02029	12	Rationalistion of Riverside (16-20) to Portglenone WwTW
Rosscor	S03212	7	A population study was carried out for this site and reviewed and adopted for AIR17
Roughfort (WWTW)	S01470	4	PE updated with AIR17 Trade Information
Seahill	S00774	1	PE updated with AIR17 Trade Information
Strabane	S03223	-638	PE updated with AIR17 Trade Information
Swatragh WWTW	S01637	9	PE updated with AIR17 Trade Information
Tamlaght WWTW	S03224	-2	A population study was carried out for this site and reviewed and adopted for AIR17
Tandragee	S02174	1029	PE updated with AIR17 Trade Information
The Loup WWTW	S01588	-16	A population study was carried out for this site and reviewed and adopted for AIR17
Tully Rd Headworks	S03975	-1	Change due to rounding or rounding down
Warrenpoint (WWTW)	S02720	-12	PE updated with AIR17 Trade Information

Name of Works	CAR ID	PE Change	Comments
Whitehouse	S00265	-12	PE updated with AIR17 Trade Information
	Total	19660	**Change in Line 6 PE since AIR16**

NB. Change in PE (-Ve AIR17 PE Higher) ; Difference between totals is due to rounding.

Difference between AIR17 and AIR16:

Line 6 for AIR16 -	**1792789**
Line 6 for AIR 17 -	**1773107**
Total Difference -	**19,682**

Note – The difference in the above totals are due to rounding of values.

Line 7 - Equivalent population served (resident) (Numerical consents)

The table below shows the changes in WWTWs PEs since AIR16 that affects equivalent population served (resident) with numerical consents for Line 7. NB. Change in PE (-Ve AIR17 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Annahilt	S00317	1	Change due to rounding or rounding down
Annsborough	S02687	-3	PE updated with AIR17 Trade Information
Antrim (WWTW)	S01422	620	PE updated with AIR17 Trade Information
Ardglass (WWTW)	S00268	-109	PE updated with AIR17 Trade Information
Augher WWTW	S03005	-12	PE updated with AIR17 Trade Information
Ballyclare	S01467	114	PE updated with AIR17 Trade Information
Ballykelly (L/Derry)	S03016	18	PE updated with AIR17 Trade Information
Ballymena (WWTW)	S01456	-1033	PE updated with AIR17 Trade Information
Ballynahinch (Down)	S00311	6	PE updated with AIR17 Trade Information
Banbridge (WWTW)	S02102	1020	PE updated with AIR17 Trade Information
Belfast (WWTW)	S00345	3781	PE updated with AIR17 Trade Information
Bushmills WWTW	S01178	-1	PE updated with AIR17 Trade Information
Carrickfergus (WWTW)	S00261	202	PE updated with AIR17 Trade Information
Castlederg (WWTW)	S03042	6	PE updated with AIR17 Trade Information
Coalisland	S02828	-33	PE updated with AIR17 Trade Information
Cookstown (WWTW)	S01582	-243	PE updated with AIR17 Trade Information
Culmore (WWTW)	S03071	332	PE updated with AIR17 Trade Information
Derryhale	S02570	-14	PE updated with AIR17 Trade Information
Dervock	S01102	-1	PE updated with AIR17 Trade Information
Donaghmore (WWTW)	S02840	-2	PE updated with AIR17 Trade Information
Donemana	S03103	-13	PE updated with AIR17 Trade Information
Donnybrewer	S03080	-185	PE updated with AIR17 Trade Information

Name of Works	CAR ID	PE Change	Comments
Downpatrick (WWTW)	S00771	-2134	PE updated with AIR17 Trade Information
Draperstown	S01615	-2	PE updated with AIR17 Trade Information
Dromara	S00316	-4	PE updated with AIR17 Trade Information
Dromore (Down)	S02127	-113	PE updated with AIR17 Trade Information
Dundrum	S00297	-569	A population study was carried out for this site and reviewed and adopted for AIR17.
Dungannon	S02850	15171	PE updated with AIR17 Trade Information
Dungiven	S03101	-15	PE updated with AIR17 Trade Information
Dunmurry	S00346	201	PE updated with AIR17 Trade Information
Enniskillen	S03218	-1496	PE updated with AIR17 Trade Information
Fivemiletown (WWTW)	S03113	-30	PE updated with AIR17 Trade Information
Glenstall	S01109	-187	PE updated with AIR17 Trade Information
Greenisland (WWTW)	S00263	341	PE updated with AIR17 Trade Information
Hilltown (WWTW)	S02701	-30	PE updated with AIR17 Trade Information
Irvinestown	S03137	-5	PE updated with AIR17 Trade Information
Keady (Armagh)	S02553	20	PE updated with AIR17 Trade Information
Kesh (WWTW)	S03140	-3	PE updated with AIR17 Trade Information
Kilkeel (WWTW)	S00313	-1351	PE updated with AIR17 Trade Information
Killinchy (WWTW)	S00252	-578	PE updated with AIR17 Trade Information
Killygonlan (WWTW)	S02043	-10	PE updated with AIR17 Trade Information
Kilrea	S01156	-108	PE updated with AIR17 Trade Information
Larne (WWTW)	S02044	-69	PE updated with AIR17 Trade Information
Limavady (WWTW)	S03162	52	PE updated with AIR17 Trade Information
Lisburn (New Holland)	S00329	-98	PE updated with AIR17 Trade Information
Lisnaskea (WWTW)	S03171	-102	PE updated with AIR17 Trade Information
Maghera (L/Derry)	S01629	-171	PE updated with AIR17 Trade Information
Magherafelt (WWTW)	S01621	-644	PE updated with AIR17 Trade Information
Moneymore (WWTW)	S01589	-7	PE updated with AIR17 Trade Information
Moneyreagh	S00337	-3	PE updated with AIR17 Trade Information
Mountjoy(Dungannon)	S02849	-1	PE updated with AIR17 Trade Information
Moy (WWTW)	S02859	-215	PE updated with AIR17 Trade Information
Newcastle (WWTW)	S00303	8	PE updated with AIR17 Trade Information
Newmills WWTW	S02852	-1	PE updated with AIR17 Trade Information
Newry (WWTW)	S02685	5594	PE updated with AIR17 Trade Information
Newtownbreda (WWTW)	S00342	-7	PE updated with AIR17 Trade Information.
Newtownbutler WWTW	S03200	-3	PE updated with AIR17 Trade Information

Name of Works	CAR ID	PE Change	Comments
North Coast (WWTWs)	S04150	678	PE updated with AIR17 Trade Information
Omagh (WWTW)	S03999	422	PE updated with AIR17 Trade Information
Portglenone WWTW	S01593	-12	Rationalistion of Riverside (16-20) to Portglenone WwTW
Roughfort (WWTW)	S01470	4	PE updated with AIR17 Trade Information
Seahill	S00774	1	PE updated with AIR17 Trade Information
Strabane	S03223	-638	PE updated with AIR17 Trade Information
Swatragh WWTW	S01637	9	PE updated with AIR17 Trade Information
Tamlaght WWTW	S03224	-2	A population study was carried out for this site and reviewed and adopted for AIR17.
Tandragee	S02174	1029	PE updated with AIR17 Trade Information
Warrenpoint (WWTW)	S02720	-12	PE updated with AIR17 Trade Information
Whitehouse	S00265	-12	PE updated with AIR17 Trade Information
	Total	19349	**Change in Line 7 PE since AIR16**

Difference between AIR16 and AIR15:

Line 7 for AIR16 -	**1,731,646**
Line 7 for AIR 17 -	**1,712,277**
Total Difference -	**19,369**

Note – The difference in the above totals are due to rounding of values.

Line 8 - Number of sewage treatment works

The number of WWTWs of 1015, on this line differs from the total of 1023 as shown in Table 17c, as the former does not include the screened outfalls (2 No.) and the unscreened outfalls (7 No.), as per the definition for this line.

The table below shows the changes in numbers of WWTWs since AIR16 for Line 8.

Name of Works	CAR ID	Change in Nr of STWs	Comments
Limestone(1)	S03164	Reinstated	Reinstated as NIW is still responsible for consent
Riverside(16-20)	S02029	Removed	Flows transferred to Portglenone WwTW
		Net Reduction	**0**

Difference between AIR17 and AIR16:

Line 8 for AIR16 -	**1,015**
Line 8 for AIR 17 -	**1,015**
Total Difference -	**0**

Line 9 – Treatment capacity available

The table below shows the changes in Treatment Capacity Available at WWTWs since AIR16 for Line 9. NB. Change in PE (-Ve AIR17 PE Higher).

Name of Works	CAR ID	PE Change	Comments
Acton WWTW	S02111	47	Upgraded during AIR17 under RWwIP.
Drumlough	S00320	-137	Upgraded during AIR17 under RWwIP.
Glenoe WWTW	S01462	-145	Upgraded during AIR17 under RWwIP.
Limestone(1)	S03164	-6	Reinstated as NIW is still responsible for consent
Longs Glebe	S01160	-22	Upgraded during AIR17 under RWwIP.
McKinley Park	S02276	-50	Upgraded during AIR17 under RWwIP.
Milltown (Aghory)	S02593	-76	Upgraded during AIR17 under RWwIP.
Riverside(16-20)	S02029	12	Flows transferred to Portglenone WwTW
Trench Rd(66-70)	S04118	-6	Upgraded during AIR17 under RWwIP.
	Total	-383	**Change in Line 9 PE since AIR16**

The change in PE equates to an increase in load of 0.023–0.06 t BOD/day (i.e. 383 x 60 for 60g/hd/day /1000/1000) from AIR16 to AIR17.

Difference between AIR17 and AIR16:

Line 9 for AIR16 -	**134.12**
Line 9 for AIR 17 -	**134.15**
Total Difference -	**0.03**

Note – The difference in the above totals are due to rounding of values

Confidence Grade

The confidence grade for line 8 remains as A2 (as for AIR16). There may still be a number of small WWTWs which are perhaps under the ownership of the NI Housing Executive or have become private due to customers perhaps installing their own private septic tanks or converting 2 houses into 1. Hence a small reduction in confidence grade i.e. A2 is viewed as necessary to reflect this uncertainty, especially as 698 WWTWs (excluding tourist PE) are listed as having a PE of less than 100.

Lines 2-7 – Sewage loads
PPP Only
Line 2 - Total load receiving secondary treatment

The total loads receiving secondary treatment have changed to reflect the load discharged from the NI Water sewer network to the PPP works.

Line 5 - Total load entering sewerage system

The information has been separated out of the 'NIW Only' figure for the PPP related catchments and recorded in this cell to readily consider the catchments being facilitated by the PPP Treatment Works. This information was not provided by the PPP Contractors as

they do not operate these catchments. The AIR17 value computed by APT is 325718PE or 7133.22 tonnes BOD/year.

Line 6 - Equivalent population served (resident)

The calculated change in the Equivalent Population Served (resident) receiving treatment reflects the change in load received from the NIW Catchments, upon which the calculation is based.

Line 7 - Equivalent population served (resident) (Numerical consents)

As all the PPP WwTW's have numerical consents, the change reflects the same change in Line 6 above for the same reasons.

Lines 14- 17 Sewage – Sludge Disposal
NIW Only

Line 14 – Percentage unsatisfactory sludge disposal

Northern Ireland Water (NIW) continues to have zero unsatisfactory sludge disposals. NIW has again assigned a confidence grade of A1 to percentage unsatisfactory sludge disposal as the total is zero.

Line 15 – Total sewage sludge produced

Sewage cake is produced from 8Nr. NIW sites and transported to PPP Contractor for incineration. Liquid sludge is also transported to the PPP Contractor (Ballynacor & Duncrue Street, Belfast) where the Contractor measures and processes same for disposal (including Belfast WwTW Indigenous).

For the purpose of AIR 17 submission Table 15 (NIW Only) relates to sewage sludge produced for 2016/17 (tds) as recorded by PPP and monthly by Ww Area Sludge Officers (reconciled using the SLS) and presented in the monthly Sludge Management Report along with an estimated quantity of WwTW & WwPS grit & screenings which are routinely removed as part of the sewage treatment process and disposed of separately under Tender C821 (Collection, Transportation and Disposal of Waste by skip). The total estimated quantity of grit and screenings removed as part of the sewage treatment process and disposed of under Tender C821 has been collated for the period of 2016/17.

Note: NI Water is aware of significant increase in total sludge produced (L15 & L16). PPP/Glen Water has provided appropriate clarification on reported quantities.

Line 16 - Total sewage sludge received from NI Water

Northern Ireland Water is contracted to transfer all sewage liquid and cake to PPP. Sewage cake is produced from 8Nr. NIW sites and transported to PPP Contractor for incineration. Liquid sludge is also transported to the PPP Contractor (Ballynacor & Duncrue Street, Belfast) where the Contractor measures and processes same for disposal (including Belfast WwTW Indigenous). That element of the sewage treatment production is reported and subsequently combined for the Total T15 submission. This data is also submitted through PPP reporting in T42.

NIW is aware of the variance between NIW cake figure and that of the NIW contractor. NIW has used the contractor figure due to perceived greater accuracy i.e. measured at end disposal point.

Note: NI Water is aware of significant increase in total sludge produced (L15 & L16). PPP/Glen Water has provided appropriate clarification on reported quantities

Line 17 - Total sewage sludge disposal

Northern Ireland Water disposes the same amount of sludge as that produced (Line 15). NIW remains committed to compliance with the requirements of the "Safe Sludge Matrix". A total of 97.9 % of sewage sludge to PPP during 2016/17, the total estimated quantity of grit and screenings removed as part of the sewage treatment process and disposed of separately under Tender C821 (Collection, Transportation and Disposal of Waste by skip) has been collated and disposed to landfill in 2016/17.

NIW has assigned a confidence grade of (B2) to sludge disposal (NIW Only) as the company has systems in place to record the volumes and the measured percentage dry solids.

PPP only

Line 14

No change – the PPP Contractor has confirmed that all sludges were disposed of through authorised routes.

Line 15 - Total sewage sludge produced

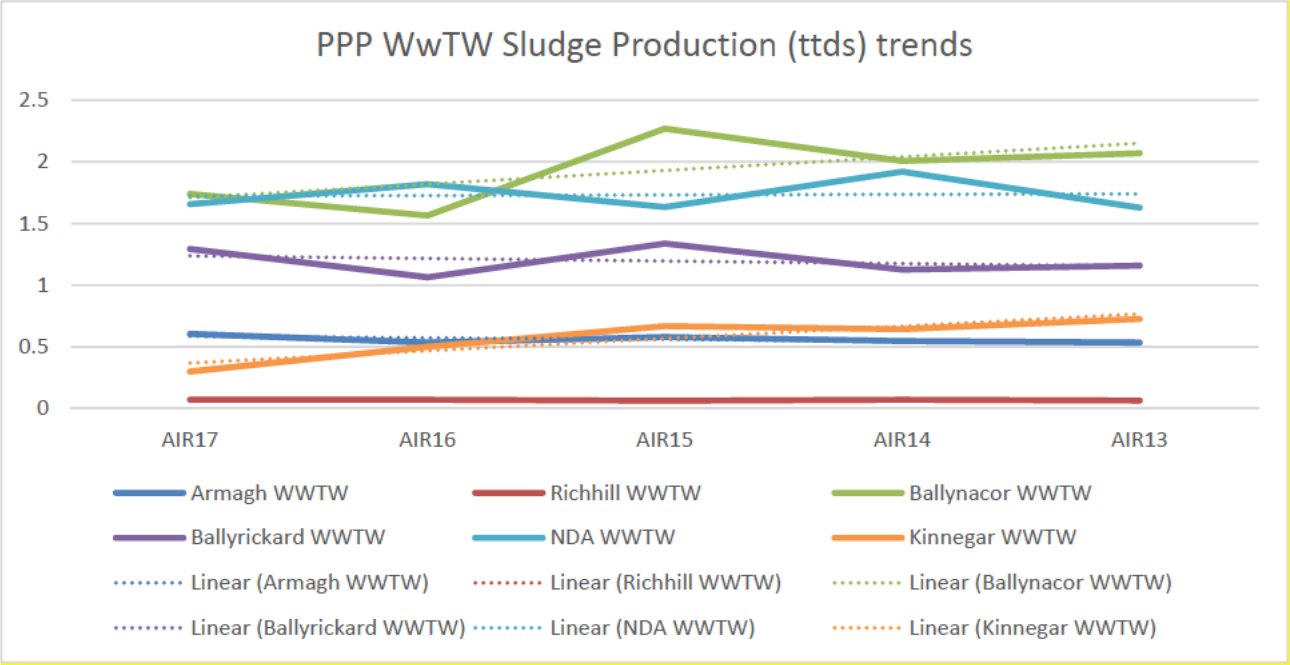
The changes in sludge produced data reflect the loads delivered to the PPP contractor from the NI Water sewer network, outside the PPP contractor's control. There are minor additions for Screenings and Grit which were initially reported in AIR13 and subsequently in AIR submissions since by the Contractors.

The variations are tabulated below;

PPP Production	AIR17	AIR16	AIR15	AIR14	AIR13	AIR12	AIR11	AIR10
Armagh WWTW	0.605	0.535	0.579	0.547	0.535	0.570	0.759	0.840
Richhill WWTW	0.071	0.071	0.063	0.071	0.065	0.066	0.213	0.210
Ballynacor WWTW	1.739	1.564	2.269	2.007	2.069	3.330	2.468	2.290
Ballyrickard WWTW	1.293	1.064	1.337	1.126	1.158	1.225	1.627	1.717
NDA WWTW	1.656	1.818	1.633	1.920	1.628	1.559	1.753	1.654
Kinnegar WWTW	0.302[1]	0.501	0.668	0.643	0.726	0.823	0.792	0.700
Omega Screenings and Grit	0.206	0.083	0.083	0.088	0.106			
Kinnegar Screenings and Grit	0.058	0.049	0.057	0.047	0.022			
Totals	5.930	5.685	6.689	6.449	6.309	7.573	7.612	7.411

The trend of PPP facility sludge production (in ttds) over the past 5 years is charted below, from which it can be seen that sludge production at the PPP WwTW is generally static or increasing marginally in the 5 year period (NB: The apparent downward trend in Kinnegar should be ignored for the reasons set out in Footnote 1)

[1] The low Kinnegar Sludge production figure in 2017 reflects the fact that significant quantities of sludge have been retained on site during the trial of various dewatering solutions, prior to MLC investment in the existing belt press assets. This figure, whilst numerically correct, should be ignored for the purpose of any trending analysis.



The notable exception to the trend is Ballynacor WwTW, which presents as a clear downward trend. Given the treatment processes have not changed in the same period and effluent compliance has been maintained, it can be deduced the overall loading on the WwTW is decreasing from within the catchment and/or from tankered imports. This is supported by the data behind Line 2 (Load Receiving Secondary Treatment).

Line 16 - Total sewage sludge received from NI Water

This reflects the change in sludge quantities received by the PPP Contractor from the Company and includes that received from Kinnegar concession, which is treated as Company sludge for the purposes of the Omega PPP Contractor's records.

Line 17 - Total sewage sludge disposal

For the purpose of PC15, an average 38 ttds p.a. sewage sludge disposal was assumed.

In AIR16 the Omega Contractor reported a sludge disposal of 38.6 ttds [38.591 ttds]

This year (AIR17) the reported figure is 42.3ttds [42.286 ttds].

The variance of ~3.6 ttds on AIR16 arises as follows:

+2.0 ttds of the Company's unthickened Belfast WwTW sludge export to Omega Contractor
+1.0 ttds of the Company's thickened sludge exports to the Omega Contractor
+0.5 ttds of the Company's dewatered sludge exports to the Omega Contractor
+0.3 ttds of the Omega Contractors own sludge production
-0.2 ttds of the Kinnegar dewatered sludge exports to the Omega Contractor

The variances are considered to be a combination of:

(i) Timing of data capture (sludges being collected and receipted for disposal)
(ii) Accurate measurement and records demanded under the Omega contract
(iii) Additional quantities of sludge produced across all WwTW assets (PPP and NIW).
(iv) Reporting of Screenings and Grit, and modification to accuracy where possible.

(v) The retention of sludge at the Kinnegar WwTW during asset trials

Specific Commentary Requirements:

- Assumptions Made:
  - 60g/h/d as per NIAUR requirements
  - Skips weights (Screenings and Grit) are recorded in wet tonnes. An assumption based on long term averages of (39%DS Screenings and 65%DS Grit) Dry Solids content has been used to convert wet tonnes into TDS. Apart from Kinnegar where the %DS is assessed for each skip weight.

- BOD loading is based on the measured influent sample result of loading applied to the WWTW processes; therefore there is no need to include a calculation for recirculated Sludge/Sludge liquors in Lines 1-7. It is not a calculated load from desktop analysis of Population, as required by the Regulator Guidance Notes. However, PPP Management team have been instructed to proceed on the basis of measured BOD and Pe calculated from measured BOD (rather than desktop calculation) as it has been advised this is the Reporter and Regulators preferred method of establishing PE and BOD.

- Sludge production is based on the records of actual sludge imported to treatment or disposal centres. This is confirmed from the Contractors records of sludge from both weighbridge / Waste Management Notes records (for sludge cake) and sludge logger records (for liquid sludge).

- The PE figures have only been established on the basis of the BOD_5 loads recorded by the end of the year and represent the load received for the AIR17 Reporting Period. They have not therefore been notified to NIEA, as any such notifications relate to calendar years.

  As the PPP contractors do not control septage, trade effluent nor manage connections of domestic population, they are unable to build up the loads on this basis. The loads are therefore determined in accordance with the Table 15 Line 2 Methodology, based on 52 treated effluent BOD_5 sample results per year. This is contrary to the requirements of the Guidance Notes, and is not consistent with how “NI Water Only data” is constructed; but PPP Management Team has been advised that this is the Reporter and the Regulator’s preferred method of calculation. The “PPP Only” data remains unchanged. The recirculated sludge/sludge liquors in Lines 1-7 are consistent with the methodology presented in AIR10-16.

Total Table

Line 14 - Percentage unsatisfactory sludge disposal

No change – the PPP Contractor has confirmed that all sludges were disposed of through authorised routes – 0% unsatisfactory disposal. PC15 assumed 0% unsatisfactory disposal

Line 15 - Total sewage sludge produced

The changes to the sludges produced are reflected in the commentary to Line 17 below.

Line 17 - Total sewage sludge disposal

In AIR16 the PPP Contractors reported a disposal of 38.6 ttds sludge disposed of. This year (AIR17) the reported figure is 42.3 ttds.

In AIR16 the Company disposed of 0.8 ttds relating to grit/screenings sludge. This year (AIR17) the reported figure is 0.8 ttds [0.787 ttds].

In total, AIR16 reported 39.4 ttds [39.393 ttds] of sludge disposed of by all parties. In this reporting year (AIR17) the figure is 43.0 ttds [43.073 ttds].

The variance of 3.679 ttds is considered to be a combination of:

(i) A variation in total tonnage of sludge disposed of by the Omega contractor from NIW, Kinnegar and Omega WWTWs as set out in Line 17 PPP Only commentary above

(ii) Additional sludges derived for PPP Contractor grit and screenings, providing a further potential for variance.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 16 NON FINANCIAL MEASURES
SEWERAGE SERVICE ACTIVITIES (NIW Only)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**ASSET BALANCE AT APRIL 1**																				
1	Total length of sewers	km	2	15,090.35	B3	15,254.37	B3	15,410.44	B3	15,581.51	B3	15,625.13	B3								
2	Total length of "critical" sewers	km	2	3,656.86	C3	3,716.68	C3	3,732.98	C3	3,760.85	C3	3,839.64	C3								
B	**CHANGES DURING REPORT YEAR**																				
3	New "critical" sewers	km	2	33.50	C3	24.68	C3	19.54	C3	36.44	C3	1.49	C3								
4	"Critical" sewers - inspection by CCTV/man entry	km	2	51.79	C4	48.98	C4	35.98	C4	71.62	C4	91.44	C4								
5	"Critical" sewers - renovated	km	2	1.41	B2	0.99	B2	1.87	B2	1.26	B2	4.65	B2								
6	"Critical" sewers - replaced	km	2	1.04	B2	3.32	B2	5.09	B2	5.32	B2	1.48	B2								
7	Abandoned "critical" sewers and other changes	km	2	0.00	B2	1.48	B2	0.50	B2	0.00	B2	0.16	B2								
8	New "non-critical" sewers	km	2	145.40	C3	172.22	C3	130.22	C3	110.60	C3	117.07	C3								
9	"Non-critical" sewers - renovated	km	2	2.31	B2	2.93	B2	1.95	B2	2.71	B2	2.53	B2								
10	"Non-critical" sewers - replaced	km	2	19.29	B2	18.08	B2	11.89	B2	7.80	B2	0.63	B2								
11	Abandoned "non-critical" sewers and other changes	km	2	0	B2	0.36	B2	0.60	B2	0.11	B2	0.29	B2								
11a	Total length of sewers replaced or renovated	km	2	24.05		25.32	B2	20.80	B2	17.09	B2	9.29	B2								
12	Sewer collapses per 1,000km	nr	1	73.6	B3	72.7	B3	85.7	B3	78.5	B6	79.1	B3								
13	Sewer blockages per 1,000km	nr	1	1,363.6	B3	1,172.1	B3	1,073.6	B3	1,023.4	B3	998.6	B3								
13a	Number of sewer blockage clearance which exceeds 6 hours	nr	0	1,250	B3	1,104	A2	2,640	B4	4,199	A2	4,285	A2								
13b	Number of sewer blockage clearance which exceeds 12 hours	nr	0	849	B3	645	A2	1,832	B4	3273	A2	3,625	A2								
13c	Number of sewer blockage clearance which exceeds 24 hours	nr	0	444	B3	203	A2	276	B4	555	A2	708	A2								
C	**ASSET BALANCE AT MARCH 31**																				
14	Total length of sewers	km	2	15,254.37	B3	15,410.44	B3	15,581.51	B3	15,625.13	B3	15,777.29	B3								
15	Total length of "critical" sewers	km	2	3,716.68	C3	3,732.98	C3	3,760.85	C3	3,839.64	C3	3,860.69	C3								
D	**INTERMITTENT DISCHARGES**																				
16a	Number of unsatisfactory intermittent discharges excluding CSOs (NIEA)	nr	0	197	C2	190	C2	159	C2	151	C2	147	C2								
16b	Number of unsatisfactory intermittent discharges CSOs (NIEA)	nr	0	318	C2	312	C2	288	C2	270	C2	263	C2								
17a	Number of intermittent discharges excluding CSOs	nr	0	1,675	B3	1,732	B3	1,751	B3	1,760	B3	1,762	C2								
17b	Number of CSOs	nr	0	779	B3	802	B3	802	B3	800	B3	796	C2								
E	**DRAINAGE AREA PLANS**																				
18	Cumulative number of drainage area plans completed	nr	0	71	A1	71	A1	58	A1	58	A1	58	A1								
19	Number of drainage area plan studies in progress at the report end of the report year	nr	0	1	A1	8	A1	8	A1	8	A1	14	A1								
20	Total sewerage drainage areas	nr	0	256	A2	254	A2	251	A2	250	A2	250	A2								
21	Cumulative % drainage area plan studies completed	%	1	27.7	A2	28.0	A2	23.1	A2	23.2	A2	23.2	A2								
22	% population/properties covered by completed studies	%	1	53.3	B3	53.2	B3	50.7	B3	50.4	B3	50.2	B3								
F	**SEWAGE TREATMENT COMPLIANCE MEASURES**																				
23	% WwTW discharges compliant with numeric consents	%	1	93.1		91.8	A1	92.17	A1	92.6	A1	93.4	A1								
24	% of total p.e. served by WwTWs compliant with numeric consents	%	1	97.9		94.5	C5	96.45	C5	97.5	A1	93.9	A1								
24a	% of total p.e. served by WwTWs compliant with numeric consents excluding upper tier failures	%	1	98.5		97.6	C5	98.15	C5	98.3	A1	98.7	A1								
25	Small WwTW compliance (works greater than or equal to 20 p.e. but less than 250 p.e.	%	2							80.72	A1	83.99	A1								
G	**NOMINATED SEWERAGE SERVICE OUTPUTS**																				
26	Delivery of improvements to nominated UIDs as part of a defined programme of work	nr	0	38	B3	11	A2	17	A2	26	A2	11	A1								
27	Delivery of improvements to nominated WWTWs part of a defined programme of work	nr	0	12	B3	17	A2	16	A2	3	A2	2	A1								
28	Small WwTWs delivered as part of the rural wastewater investment programme	nr	0	14		7	A2	18	A2	4	A2	8	A2								
H	**ADDITIONAL SEWERAGE SERVICE OUTPUTS**																				
29	CSO and EO discharges at which event and duration monitoring equipment has been installed	nr	0							0	B2	0	B2								
30	WwTWs upgraded to comply with PPC Regulations	nr	0							0	A1	0	A1								
31	Impermeable surface water collection area removed from the combined sewerage network	m2	0							28,560	B2	54,864	B2								
32	Number of sustainable WwTW solutions delivered (p.e. ≥ 250)	nr	0							1	A1	1	A2								
33	Number of sustainable WwTW solutions delivered (p.e. < 250)	nr	0							0	A1	1	A2								

Table 16 - Sewerage Service Activities (NI Water only WWTW)

Line 1 – Total length of sewers at 1 April

This value has been extracted from line 14 of the AIR16 Table 16.

Line 2 – Total length of 'critical' sewers at 1 April

This value has been extracted from line 15 of the AIR16 Table 16.

Lines 3 to 11a – Changes during report year

The tables below show the make-up of the figures submitted for these lines.

Line	Description	EP	DS	CSD	Total(km)
3	New "critical" sewers	1.49	0	0	1.49
5	"Critical" sewers - renovated	4.36	n/a	0.29	4.65
6	"Critical" sewers - replaced	1.48	n/a	0	1.48
7	Abandoned "critical" sewers and other changes	0.16	n/a	0	0.16
8	New "non-critical" sewers	3.15	113.92	0	117.07
9	"Non-critical" sewers - renovated	1.05	n/a	1.48	2.53
10	"Non-critical" sewers - replaced	0.63	n/a	0	0.63
11	Abandoned "non-critical" sewers and other changes	0.29	n/a	0	0.29
11a	Total length of sewers replaced or renovated				9.29

Lines 3 and 8 – New 'critical' sewers/ new 'non-critical' sewers

Lines 3 and 8 include lengths of sewers within 'new development' which have been adopted by the Developer Services section of NI Water. The total length has decreased from 147.04 km in AIR16 to 118.560km.

The critical sewer lengths have been calculated using the same methodology as AIR16.The confidence grade is unchanged at C3.

Line 4 - 'Critical' sewers – inspection by CCTV/man entry

Line	Description	EP	In-house	AP	Total(km)
4	'Critical sewers'- inspection by CCTV/man entry	16.16	35.68	39.6	91.44

Asset Performance

NI Water carried out 28.5km of CCTV work with 15km of SPG4s and SPG5s discovered to enable the rehab programme for 17/18 to be addressed. The confidence grade for this line remains unchanged at C4.

Lines 5, 6, 9, 10 and 11a - sewers renovated and replaced

The total length renovated and replaced (9.29km) is lower than the AIR 16 figure of 17.085 km. Confidence grades remain unchanged at B2.

Lines 7 and 11 - sewers abandoned

These lines had a return of 0.45 km which is higher from the AIR16 figure of 0.11 km.

Lines 12-13c – Sewer collapses and blockages

General

NIW collate the number of sewer blockages and sewer collapses from the draft invoices provided by the contractor and approved by the relevant Field Managers. As result of further refinement at NIW's request the contractor now, (end of March 2015), accurately records on their invoices what section within the sewer the blockage occurred (e.g. main, lateral or private). NIW are now in a good position for AIR17 to report on whether collapses or blockages have occurred in a private lateral, public lateral or public main sewer. The data is collected for both main and lateral sewers but the return only requires the totals for collapses and blockages. NIW does not distinguish between collapses and essential repairs to sewers; they are all collated together for AIR figures. The total number of rising main failures added to the total number of gravity sewer collapses provides the number of sewer repairs for table 46 line 44. During the reporting year there were as follows

5 Rising Main Failures Repaired
1183 Gravity Main Sewers Repaired
60 Gravity Lateral Sewers Repaired
1248 Total number of sewer repairs

15156 Main Sewer Blockages
599 Lateral Sewer Blockages
15755 Total Number of sewer blockages

Of the 15755 sewer blockages, for 16/17 reporting year there were 47 incidents of actual internal flooding.

All FOC's attributed to 38 Blockages 8 Collapses 1 Equipment Failure

NIW are now more proactive in their approach to repeat blockages, as part of their annual performance objectives all the Field Managers (FM) have been tasked to make a 5% reduction in the number of blocked sewers and the AIR return figure is evidence of this success rate. This reduction is being targeted by NIW Customer Field Managers (CFM) using the resource of designated field technicians to carry out CCTV investigations on sewers that have repeat blockage complaints, any faults found are remedied, thus reducing the number of repeat incidents. NIW have now generated a new standard job that enables the contractor, when he is attending a blocked sewer, to carry out a CCTV to locate and mark any suspected defects in the pipe, these can then be repaired and this prevents further repeat blockages and a reduction in the total number of blockages annually. Repeat blockages are recorded on the draft invoices, from the contractor, as they are not paid unless the original blockage was more than 14 days prior to the reoccurrence. These blockages are discounted from the blockage numbers
This has helped reduce the number of sewer blockage complaints by 1.48% on last year's total.

NIW now run a monthly report in the Ellipse system that confirms the length of time a sewer blockage job took to be completed. WWBU now collate a list of all the work order numbers on the blockage drafts which are not "full rate" blockage clearance jobs and these jobs are excluded from the above-mentioned Ellipse data. Due to the fact that the Ellipse system calculates the length of time a job takes from the time the work request is raised until the work request is closed all jobs exceeding 24 hours are investigated as all follow-on jobs are included in the time the work request is open. These jobs are then reported in

the correct category according to the length of time the blockage job actually took to be completed.

- The number of rising main failures and the number of gravity sewer collapses are summated to give the total number of sewer collapses.
- The total number of sewer collapses is divided by the total length of sewers at 31 March 2017 to give the number of sewer collapses per kilometre.
- The number of sewer collapses per kilometre is multiplied by 1000 to give the number of sewer collapses per 1,000km.

Table 16 line 12 has been calculated using the figure reported for table 46 Lines 32 and 33 and the total length of sewers figure reported for Table 16 line 14.

Reported blockages which could not be identified or required no action when investigated on site are recorded on the blockage draft invoices as attendance only and are only paid an attendance rate therefore they are not counted in the blockage numbers for the AIR return.

Line 13 - Sewer Blockages per 1,000 Km

- The number of sewer blockages is divided by the total length of sewers at 31 March 2017 to give the number of sewer blockages per kilometre.
- The number of sewer blockages per kilometre is multiplied by 1000 to give the number of sewer blockages per 1,000km.

Table 16: line 13 has been calculated using the figure reported for table 46 Line 36 and the total length of sewers figure reported for Table 16 line 14

Lines 13a, 13b and 13c - Number of blockage clearance which exceeds 6, 12 & 24 hours

NIW now run a monthly Ellipse report that confirms the length of time a sewer blockage job took to be completed. WWBU now collate a list of all the work order numbers on the blockage drafts, which have not been paid the “full rate” for blockage clearance and these jobs are excluded from the above-mentioned Ellipse data. Due to the fact that the Ellipse system calculates the length of time a job takes from the time the work request is raised until the work request is closed all jobs exceeding 24 hours are investigated as all follow-on jobs are included in the time the work request is open. These jobs are then reported in the correct category according to the length of time the blockage job actually took.

Confidence Grading – Lines 12, 13, 13a, 13b & 13c

Because NIW are using data from checked and paid invoices (B2) and total length of sewers (B3), the confidence grade for the AIR17 L12 & L13 is B3. NIW expects this to consolidate as we move forward into AIR18 as report building continues with the single Sewer Maintenance Contractor.

Because NIW are using an Ellipse report (minus work orders that are not full rate blockage clearance jobs), to gather the information for Lines 13, 13b & 13c and this is being manually confirmed, these lines have been given a confidence grade of A2 for AIR17.

Line 14 – Total length of sewers

There has been no change to the structure of the data reported on this year from the previous years that would directly affect the totals provided. The same queries have been used to extract the data from the Corporate Asset Register and have been checked to ensure that they are still relevant. The confidence grade of the data will remain the same

as the previous year. Any new data will have adhered to the NIW Code of Practice for the submission of asset data ensuring that data quality levels have been maintained throughout the year.

Line 15 – Total length of 'critical' sewers

The same estimation techniques have been used as in previous years and are still dependent on 3rd party datasets. The analysis performed assesses the criticality of the sewers based on size, material and depth attributes of the sewer and its location in regards to structures, roads, railways and watercourses. This is a desktop exercise based on the location and attributes of each sewer as per the definition of critical sewers in the WRc Sewerage Rehabilitation Manual. As the result of the analysis is still an estimation the confidence grade of C3 will remain in place.

Lines 17a and 17b – Sewerage System Intermittent Discharges

Table A - Depicting differences between the sewerage system overflows between AIR16 and AIR17

Intermittent Discharges	APT Preliminary AIR16 Number	Final AIR16Number (after removal of Dual, Duplicates and Bifurcation Assets)	APT Preliminary AIR17 Number	Difference between AIR16 & AIR17 Preliminary Number	Total Number of Dual, Duplicates and Bifurcation assets to be removed	Final AIR17 Number (after removal of Dual, Duplicates and Bifurcation Assets)
Combined Storm Overflows (CSOs)	842	800	838	-4	-42	796
Waste Water Pumping Stations (WwPSs)	1106	1104	1107	+1	-2	1105
Total Number of Intermittent Discharges	1948	1904	1945	-3	44	1901

Hence for AIR17 the total number of Sewerage System Overflows is 796 plus 1105 i.e. 1901.

From the APT data used there has been a decrease in CSOs since AIR16 (i.e. 842 to 838). There has been 1 net change in WWPS overflows since AIR16 (i.e.1106 to 1107). As 2 have been added and 1 removed.

Preliminary net decrease of 4 CSOs overflows since AIR16. Preliminary total decrease of 3 overflows since AIR16 (i.e. 1948 to 1945).

(For a further breakdown see Table B, C & D – Changes in Intermittent Discharges by Drainage Area below).

The total number of consented assets held by NI Water is 1945. However a number of these assets (n=44) are not included in the finalised number. This is because these are

duplicates, dual manholes or bifurcation manholes which do not fall within the industry standard for reporting purposes.

The 44 sewerage system overflows have been categorised into the following:

- 29 Dual Manholes;
- 4 Bifurcation Manholes;
- 11Duplicate Assets

(For further details see Tables E, F & G below)

Overall this equates to a:

Net decrease of -3 Preliminary overflows since AIR16
Plus: 1948 Preliminary overflows identified in AIR16
Sub Total: 1945 sewerage system overflows
Minus: 44 Overflows not included in the finalised number for AIR17
Total: 1901 sewerage system overflows identified for AIR17

An exercise has been ongoing over the AIR 10,11,12,13, 14 & 15 reporting years to confirm the number of sewage system overflows within NI Water. An agreement is in place with Northern Ireland Environment Agency (NIEA) that updates will only be submitted on a catchment by catchment basis once all information is confirmed.

As reported in AIR 16, the consultants employed to carry out this work submitted their final conclusions in December 2010. The final conclusions detailed assets that are currently consented, that do not have overflows as well as assets which have overflows and are currently unconsented. However before this information can be adopted by NI Water, it has to be signed off by NI Water Network Sewage Business Unit and any changes included on NI Water's Geographical Information Service (GIS). This process is ongoing and currently Network Sewage Business Unit has confirmed the information for a total of 135 catchments (8 in AIR 11 + 36 in AIR 12 + 38 in AIR 13 + 44 in AIR 14 + 8 in AIR 16 +1 in AIR 17).

Table B – APT Preliminary changes in intermittent discharges by drainage area for AIR17

Drainage Area	No of CSOs added since AIR16	No of CSOs removed since AIR16	No of WWPS added since AIR16	No of WWPS removed since AIR16	Comments
Bangor DA	0	2	0	0	2 CSO's Closed
Holywood DA	0	2	1	0	2 CSO's Closed. 1 WWPS Added.
Antrim DA	0	0	0	1	1 WWPS Closed
Kilkeel DA			1		1 WWPS Added
Total Number of intermittent discharges added or removed since AIR16	0	4	2	1	
Net decrease in CSOs since AIR16	4				
Net Increase in WWPSs since AIR16			1		

Table C – AIC Preliminary changes in Intermittent discharges by drainage area for AIR17

Drainage Area	No of CSOs added since AIR16	No of CSOs removed since AIR16	No of WWPS added since AIR16	No of WWPS removed since AIR16	Comments
N/A	0	0	0	0	**No Updates from AIC for AIR17**
AIC Net Increase in CSOs since AIR16	**0**				
AIC Net Increase in WWPSs since AIR16			**0**		

Table D – Combined Totals of APT & AIC Preliminary changes in Intermittent discharges by drainage area for AIR17

	No of CSOs added since AIR16	No of CSOs removed since AIR16	No of WWPS added since AIR16	No of WWPS removed since AIR16
Preliminary APT number of intermittent discharges added or withdrawn since AIR16	0	-4	2	1
Preliminary AIC number of intermittent discharges added or withdrawn since AIR16	0	0	0	0
Subtotals	0	-4	2	0
Preliminary net increase or decrease in WWPS & CSOs since AIR16	-4		+1	
Preliminary total decrease in sewage system overflows for AIR17	-3			

Table E - Dual Manholes not included in the finalised number for AIR17

Name of Sewer System	Car Id	Easy reference of asset from Consent of Discharge Map	Dual Manholes (To be Withdrawn)	Total No: of Dual Manholes per drainage area
Antrim	CO002586738		Y	1
Whitehouse	NM001345599		Y	16
Whitehouse	NM001348440		Y	
Whitehouse	NM001345603		Y	
Whitehouse	NM001349241		Y	
Whitehouse	NM001347238		Y	
Whitehouse	NM001346012		Y	
Whitehouse	NM001339619		Y	
Whitehouse	NM001340886		Y	
Whitehouse	NM001350136		Y	
Whitehouse	NM001340887		Y	
Whitehouse	NM001349313		Y	
Whitehouse	NM001339615		Y	
Whitehouse	NM001340884		Y	
Whitehouse	NM001349320		Y	
Whitehouse	NM001349319		Y	
Whitehouse	NM001349658		Y	
Ballynacor	NM001229100		Y	12
Ballynacor	NM001230688		Y	
Ballynacor	NM001231583		Y	
Ballynacor	NM001231355		Y	
Ballynacor	NM001229426		Y	
Ballynacor	NM001232930		Y	
Ballynacor	NM001278776		Y	
Ballynacor	NM001278775		Y	
Ballynacor	NM001234366		Y	
Ballynacor	NM001280565		Y	
Ballynacor	NM001282390		Y	
Ballynacor	NM001231354		Y	
Total Number of Dual Manholes not included in the finalised number for AIR17				**29**

Table F - Bifurcation Manholes not included in the finalised number for AIR17

Name of Sewer System	Car Id	Easy reference of asset from Consent of Discharge Map	Bifurcation Manhole (To be Withdrawn)	Total No: of Bifurcation Manholes per drainage area
Carrickfergus	NM001353097	Ellis Street A	Y	1
Rathfriland	NM001291669	John Street	Y	1
Waringstown	NM001238461	CS 06	Y	1
Enniskillen	CO003124504		Y	1
Total No: of Bifurcation Manholes not included in the finalised number for AIR17				**4**

Table G - Duplicate Assets not included in the finalised number for AIR17

Name of Sewer System	Car Id	Easy reference of asset from Consent of Discharge Map	Duplicate Assets (To be Withdrawn)	Total No: of Duplicate Assets per drainage area
Ballymena	SP002022687	Tullagharley Transfer WWPS FA Overflow	Y	1
Whitehouse	CO002966311	John Street	Y	6
Whitehouse	CO002987846		Y	
Whitehouse	CO002914133		Y	
Whitehouse	CO002988722		Y	
Whitehouse	CO002987839		Y	
Whitehouse	CO000984647		Y	
Omagh	SP002021852	Omagh Transfer WWPS	Y	2
Omagh	SP002021852	Omagh Transfer WWPS	Y	
Ballynacor	CO000984402	Thomas Street	Y	2
Ballynacor	SP002022218	Annsborough	Y	
Total Number of Duplicate not included in the finalised number for AIR17				**11**

Lines 17a and 17b – Above Ground Overflows from within WTWWs

Table H - Total number of Overflows within WWTW

	AIR16 Number	AIR17 Number
Total number of Overflows from within WWTW	654	657

Hence for AIR17 the total number of overflows within WWTW is 657.

The overall number of WWTW overflows from AIR16 to AIR17 has had a net increase of 3 overflows. With regards to the number of additional and withdrawn overflows and further changes to the designation of the type of overflow listed, see Tables H to P below. The increase in WWTW overflows in AIR17 is mainly due to capital investment which has resulted in numerous small works now having an overflow facility.

The physical changes on the ground with respect to the number of overflows within WWTW since AIR15 are as follows:

- 1 Overflow within WWTW withdrawn since AIR16.
  (See Table I, J, K & L below)
- 4 Additional overflows within WWTW since AIR16.
  (See Table M, N & O below)

Hence a net increase of 3 overflows since AIR16.

Table I - Overflows within WWTW withdrawn since AIR16 due to works becoming a pump away in AIR17

NAME of Works	Site ID	Status in AIR17	Withdrawn O/Fs Since AIR16
Not applicable for AIR17			0

Table J - Overflows within WWTW withdrawn since AIR16 due to works being upgraded

NAME of Works	Site ID	Status in AIR17	Changes to Overflows for AIR17	Withdrawn O/Fs Since AIR16
Drumlough	S00320	Works Upgraded	Removal of Formula A 0/Fs only.	-1
Total Number of overflows withdrawn since AIR16 due to the works being upgraded				**-1**

Table K – Withdrawn Overflows within WWTWs due to incorrect designation in AIR17

NAME of Works	Site ID	Status in AIR17	Withdrawn O/Fs Since AIR16
Not Applicable for AIR17			0

Table L– Summary of the total number of Overflows withdrawn since AIR16

Total of overflows withdrawn since AIR16 due to the works becoming a pump away	0
Total of overflows withdrawn since AIR16 due to the works being upgraded	-1
Total of Withdrawn Overflows due to incorrect designation in AIR16	0
Combined Total Number of overflows within WWTW withdrawn since AIR16	**-1**

Table M - Additional overflows within WWTW since AIR16 due to WWTW upgrades

NAME of Works	Site ID	Status in AIR17	Changes to Overflows for AIR17	Additional O/Fs Since AIR16
Glenoe	S01492	Works upgraded	1 additional FFT O/F	1
The Loup	S01598	Works upgraded	1 additional FA O/F	1
Milltown (Aghory)	S02593	Works Upgraded	1 additional FFT O/F	1
Trench Road (66-70)	S04118	Works Upgraded	1 additional FFT O/F	1
Total Number of additional overflows since AIR16 due to WWTW being upgraded				**4**

Table N - Additional overflows within WWTW due to incorrect designation in AIR17

NAME of Works	CAR ID	Status in AIR17	Changes in Overflows for AIR17 from Process Info	Additional O/Fs Since AIR16
Not Applicable for AIR17			0	0

Table O – Summary of additional overflows within WWTW since AIR16

Total Number of additional overflows since AIR16 due to works being upgraded	4
Totals Number of additional overflows within WWTWs due to incorrect designation in AIR16	0
Combined Total: of Additional overflows within WWTWs since AIR16	**4**

For AIR17, 1 overflow has been withdrawn (see Table J) and 4 additional overflows (see Table M) due to works being upgraded have now been included. This equates to a net increase of 3 additional overflows since AIR16.

Table P – Summary of Overflow type within WWTW

Overflow Type	AIR16 Overflows from WWTW	AIR17 Overflows listed for comparison purposes with AIR16	AIR17 Overflows from WWTW	AIR17 Overflows listed for comparison purposes with AIR16	Difference between AIR16 & AIR17
Formula "A" O/Fs only	171	199	171 (addition of The Loup and deduction of Drumlough)	199	0
Formula "A" O/Fs (which also act as PS E/O)	19		19		
Formula "A" O/Fs with Storm (which also act as PS E/O)	9		9		
FFT O/Fs only	100	329	103 – (addition of Trench Road (66-70), Milltown (Aghory and Glenoe)	332	3
FFT O/Fs (which also act as PS E/O)	16		16		
FFT O/Fs with Storm Retention	200		203		
FFT O/Fs with Storm Retention (which also act as PS E/O	10		10		
3 DWF	15	15	15	15	0
Additional Overflows-storm	6	111	6	111	0
Additional Overflows-other structures	6		6		
Additional Overflows-pumping station E/O	99		99		
Total No of WWTWs Overflows	**654**	**654**	**657**	**657**	**3**

Since AIR16 the Asset Performance Team has continued to review their WWTW overflow summary information from Water Order Consent (WOC) applications.

This provides further refinement and greater confidence in the designation of overflow type. Therefore for the purpose of these lines APT has not endeavored to use A/C data due to the on-going A/C process of subscribing WOC information across onto GIS.

Comparison between AIR16& AIR17 – CSOs in the Sewerage System

The number of CSOs in the sewerage system has decreased since AIR16 i.e. (800 in AIR16 – 796 in AIR17). The final reported number is 796, 838 minus 42 Dual, Duplicates and Bifurcation assets which are not reported upon.

This improved figure in CSOs is due to on-going improvements in our data capturing process. When the process has been rectified, there will be a significant improvement in data quality, GIS network data, and the addition of CSOs which had previously been unidentified or unconsented.

Lines 18, 19, 20, 21 and 22 - Drainage Area Plans

1. Background

NI Water had a programme of Drainage Area Studies which commenced in 1995. The programme related to those drainage areas with residential population greater than one thousand. The status of the networks within the programme is summarised in the schedule below.

Each Drainage Area Study has used the full investigation procedure set out in the Sewerage Rehabilitation Manual, 4th Edition (WRc), including a CCTV survey targeted at surveying all critical sewers within the network.

More recently, networks with less than 5000 population have been subject to a scoping-study which seeks to identify the needs within the network, and allows a decision to be made as to whether a full DAS is justified.

It has been NI Water practice to review each Study on a 5-year cycle and, if necessary, to commission an update of the Study. A number of updates of older studies have been completed and others have commenced.

2. Current studies

Following studies are being carried out for Model Build and Verification:

- Greyabbey
- Millisle
- Newry
- Annesborough/Castlewellan
- Bangor
- Seahill

The studies below have achieved completion of the first stage - Model Build and Verification – of a study and second stage – Needs and Options are in process.

- Newtownbreda
- Whitehouse
- Carrickfergus
- Larne
- Ballyclare
- Omagh
- Ballyrickard
- Cookstown

3. Specification

NI Water's DAS specification is the "NI Water Risk Based Drainage Area Plan Document".

4. PC 15

To date, the principal driver for DAPs in Northern Ireland has been the need to develop UID solutions. The PC15 capital plan includes very limited funding for additional UID projects. There is therefore a risk that DAPs produced at present will not achieve funding for implementation and will therefore inform the PC21 business plan.

5. Outputs.

The main outputs from a DAP are:

- UIDs
- DG5s
- New Developments.
- SPG4s and SPG5s these are added to the Sewer Risk tool to enable these SPG4s and 5s to be assessed along with the other SPG4s and 5s within the overall sewerage network to enable a prioritised list to be produced.

DRAINAGE AREA STUDY PROGRAMME
STATUS AT APRIL 2017

CATEGORY A – Drainage Area Studies Completed Since 2003

Initial DAS	Catchment	Domestic population	DAP date
	Magheralin	2163	Jul-05
	Tandragee	5512	Jun-05
	Waringstown	5388	Jun-05
	Draperstown	2256	Jun-06
	Maghera	4492	Jun-06
	Moneymore	1833	Jun-06
	Greyabbey	1079	Feb-06
	Kircubbin	1347	Feb-06
	Portaferry	2870	Feb-06
	Ballyhalbert	1511	Aug-06
	Ballywalter	2197	Aug-06
	Cloughey	1194	Aug-06
	Portavogie	2624	Aug-06
	Castledawson	792	Nov-06
	Magherafelt	10,952	Nov-06
	Portglenone	2819	Oct-06
	Castlewellan	3570	Oct-06
	Dromore	6084	Nov-06
	Maghaberry	2163	Nov-06
	Donaghadee	6470	Mar-06
	Millisle	2331	Mar-06
	Whitehead	3862	Mar-06
	Newcastle	9577	Dec-05
	Annalong	2430	Jun-06
	Dundrum	1936	Jul-06
	Kilkeel	6807	Jul-06
	Downpatrick	11,974	Sep-05
	Ardglass	1874	Oct-06
	Upper Falls	27683	Apr-09
	Bushmills	2015	Apr-09
	Portballintrae	1785	Apr-09
	Ballyrickard (Newtownards)	39165	Nov-08

	REVISITED DAS		
	Catchment	**Domestic population**	**DAP date**
	East Belfast	100,000	Feb-10
	Greencastle	8500	Apr-10
	Lisburn	40,769	Oct-09
	Ballymoney (Glenstall)	12894	Oct-04
	Seahill	2831	Apr-06
	Dunmurry	35,856	Nov-03
	Hillsborough	3284	Aug-03
	Ballyclare	14,612	Jul-04
	Coleraine	22,730	Nov-06
	Moira	4342	Apr-03
	Lurgan	26512	Apr-03
	Rathfriland	2724	Nov-03
	Bessbrook	3000	Feb-04
	Richhill	2927	Feb-04
	Limavady	13,869	Sep-03
	Strabane	15,463	Sep-03
	Londonderry	75529	Nov-06
	Carrickfergus	28,170	Aug-03
	Randalstown	5734	Mar-08
	Antrim	31983	Mar-08
	Ballycastle	10,592	Jun-05
	Portadown	30,154	Nov-06
	Craigavon	16,281	Nov-06
	Armagh	17,568	Apr-09
	Warrenpoint	6000	Apr-09
	Bangor	59813	Oct-10
CATEGORY A POPULATION		**770892**	

Category B - Catchments Subject to Completed Scoping Studies

	Catchment	**Domestic population**	
	Annahilt	1550	
	Saintfield	3852	
	Crossgar	1892	
	Ballykelly	2091	
	Dungiven	3624	
	Eglinton (Donnybrewer)	4130	
	Greysteel	1977	
	Ballygowan	3029	
	Killyleagh	3276	
	Fintona	1858	
	Fivemiletown	1569	

	Catchment	Domestic population	
	Irvinestown	2240	
	Lisnaskea	4029	
CATEGORY B POPULATION		**34634**	

CATEGORY C - DAS STAGE 1 COMPLETE

Initial DAS	Catchment	Domestic population	
	Coalisland	6576	
	Gilford	2028	
	Markethill	2276	
	Castlederg	3561	
	Newbuildings	4500	
	Newtownstewart	1748	
	Sion Mills	3118	
	Castlerock	1883	
	Bellaghy	1261	
	Garvagh	2159	
	Kilrea	1785	
	Ballycarry	1280	
	Ballystrudder	1026	
	Crossmaglen	2235	
	Dungannon	15,486	
	Keady	3339	
	Glenavy	1434	
	Ballynahinch	6052	
	Newtownbreda	31,785	
	Ballykelly	3662	
	Dungiven	4744	
	Cushendall	4006	
	REVISITED DAS		
	Ballymena	43,620	
	Omagh	22,784	
	Cookstown	12,724	
	Whitehouse	66,885	
	Larne	21749	
	Carrickfergus	28170	
	Ballyclare	14612	

CATEGORY D – DAS YET TO COMMENCE

	Catchment	Domestic population	

CATEGORY E - DASs Requiring a Revisit

	Catchment	Domestic population	
	Crumlin	4260	
	Holywood	12000	
	Belfast	239,457	
	Greenisland	8275	

The above domestic PEs have been updated where possible from the 'Master List of AIR12' spreadsheet.

Lines 23 – 25 - Sewage treatment compliance measures

Introduction

The Northern Ireland Environment Agency (NIEA) issues Water Order Consents (WOC) which set out legally binding conditions under which discharges to the aquatic environment are permitted. NI Water has in the order of 1500 WOC's covering all Waste Water Treatment Works (WWTW), Water Treatment Works and sewerage systems.

NIEA assesses compliance on a calendar year basis, against WOC and UWWTR standards to give the "official" compliance figure. However, to inform Management of progress on achieving Key Performance Indicators (KPI's) and address any potential problems, monthly reports are produced. In 2016 the KPI's related to wastewater treatment performance were:

- The percentage of WWTW serving more than 250 Population Equivalent (PE) compliant with the WOC and Urban Wastewater Treatment Regulations (UWWTR).
- The percentage PE served by compliant WWTW

Changes carried forward for AIR 17

1. For AIR 17 data the base for the WWTW in service aligns with the compliance figures of the KPI outturn and NIEA compliance assessment, which reports on all works in service at the start of the calendar year.
2. The PE data used to populate this table are the PE's derived by the Asset Management Section (Performance Team – Above Ground) for the AIR 15 Return. These same PE's were also used to calculate the number of audit samples required per site for the 2016 reporting year and agreed with (NIEA).
3. Only WWTW serving greater than 250PE with numeric standards are included. No qualifying works were excluded from the assessment, with all regulatory samples having been sampled and analysed for the regulatory parameters.
4. The list of WWTW for AIR 17 contains a number of works which have crossed sampling thresholds. Table 1, which indicates the sampling frequencies associated with WWTW PE's, is provided below.

Table 1 – Sampling Frequency Table

PE	Sampling Frequency
<250 PE	0
250 - 4,999 PE	12
5,000 - 49,999 PE	24
>50,000 PE	18

If the PE of a WWTW causes a difference in sampling frequency, NIEA require evidence to justify the change. Evidence is required in the form of results of a flow and load survey or daily inlet sample results for a period of preferably one year but no less than six months. Table 2 indicates the WWTW affected by sampling frequency threshold changes and is provided overleaf.

Table 2 – Sampling Frequency Threshold Changes

Works Name	PE used in AIR15	PE Supplied by Asset Management	Threshold Being Crossed
Ballymena	113,825	69,915	100,000
Dunmurry	53,605	46,243	50,000
Dromore (Tyrone)	2032	1917	2,000
Dundrum	2613	1674	2,000

The 2012 sample scheduling PE data, which was agreed with NIEA in November 2011, has been applied to the works in Table 2, in the absence of flow and load data.

5. Only NI Water operated WWTW are included in assessment.

How the compliance is measured

Line 23 – Percentage of WWTW discharges compliant with numeric consents

The WOC specifies the number of samples to be taken per year and the parameters which have to be determined. A WWTW may fail if the required numbers of samples are not taken or the full range of parameter's are not determined.

Compliance for each WWTW was assessed on a parameter basis over a calendar year using the Look-Up Tables (LUT) of the Urban Waste Water Treatment Regulations (NI) 1995. This statistically derived methodology permits a certain number of exceedances, based on the number of samples taken, for each parameter included in the WOC e.g. where 24 samples are taken, three exceedances of each parameter are permitted. When this number of exceedances is surpassed a WWTW is deemed to fail. Table 3 in Appendix 1 details the relevant section of the Look-Up Table.

A number of WWTW have an additional clause in the consent known as an Upper Tier Limit (UTL) on the sanitary parameters of Biological Oxygen Demand (BOD, Suspended Solids (SS) and Ammonia (NH_4). One exceedance of this standard will lead to the WWTW failing for the year.

The WOC standards are contained in the Laboratory Information Management System (LIMS) and the audit sample results are automatically assessed against the standard. LIMS generates a standard report listing all WWTW with numeric standards and indicating the number of exceedances and whether the works has passed or failed. The LIMS report is accessed through:

Sample Manager/ Reporting / Sewage Reports / NIEA Monthly Reports / All sites

A small number of WWTW have nutrient standards, nitrogen and/or phosphorus, although these are assessed on an annual average. While LIMS calculates a running average, which is displayed in the report referred to previously, it does not have the facility to compare this against a standard. This requires that the average is compared manually on an ongoing basis with the WOC standard. All standards can be viewed on Sharepoint at:

Asset Management/Environmental Regulation/Wastewater and Waste/Tracking/Consent database over 250 consent

Exceedances can be discounted from compliance assessment should NI Water be able to demonstrate to NIEA that, at the time of the exceedance, a works was not under normal operating conditions. The definitions of abnormal operating conditions are given in Appendix 2 but NIEA may permit discounts under other conditions e.g. skewing of performance through too many samples being lifted in a short period caused by the rescheduling of samples. Should a sample be discounted it must be replaced by another sample taken on the same day of the week. A replacement sample when entered on LIMS will register automatically on the compliance report.

NIEA can also issue interim time banded standards during capital upgrades of a WWTW. This is a more relaxed standard applicable for a specified period over which construction work may disrupt the normal treatment processes. When this time banded standard is entered in LIMS it is taken account in the production of the compliance report.

At monthly intervals (for the KPI, Board and CSDD/MT) and at the end of the calendar year, the number of WWTW which have passed their numeric WOC was calculated as a percentage of the total number of works to determine the compliance with the target.

Line 23 Calculations – Taken from AIR 17 Calculation Spreadsheet

No. of NI Water Only WWTW's = 227
No. of failing NI Water Only works = 15
No. of passing NI Water Only works = 212

212/227 x 100 = 93.39%
Reported to one decimal place = **93.4%**

Line 24 – Percentage of Total PE Served by WWTW's Compliant with Numeric Consents

The PE served by compliant WWTW was calculated as a percentage of the PE served by the total number of WWTW. As referred to above it should be noted that Upper Tier Limits (UTL) were applied in determining this compliance. The figure reported is based on the total population.

Line 24 Calculations – Taken from AIR 17 Calculation Spreadsheet

PE of failing NI Water Only works = 108869
Total PE of NI Water Only works = 1796689
PE of passing NI Water Only works = 1687820

1687820 / 1796689 x 100 = 93.94
Reported to one decimal place = **93.9%**

Line 24a – Percentage of total PE served by WwTWs compliant with numeric consents excluding upper tier failures

The PE served by compliant WWTW was calculated as a percentage of the PE served by the total number of WWTW. As referred to above it should be noted that Upper Tier Limits (UTL) were not applied in determining this compliance. The figure reported is based on the total population.

Line 24a Calculations – Taken from AIR 17 Calculation Spreadsheet

PE of failing NI Water Only works (Exc UT) = 23489
Total PE of NI Water Only works = 1796689
PE of passing NI Water Only works = 1773200

1773200 / 1796689 x 100 = 98.69
Reported to one decimal place = **98.7%**

The data reported in this table was new for AIR16. As more information is developed in future AIR reporting cycles, further commentary can be developed on emerging trends for these measures.
The application of confidence grade A1 to lines 24 and 24a is considered appropriate as these lines are reporting a percentage of total consented PE values, the values of which are agreed with NIEA. The change from C5 to A1 was made in response to the Reporter's recommendation in AIR15 commentary that a much higher confidence grade should be applied to these lines.

Line 25 - Small WwTW compliance (works greater than or equal to 20 p.e. but less than 250 p.e.)

A new compliance measure has been introduced for PC15 for small works in the band 20 – 249 population equivalent (pe). This measure is directly linked to delivery of small works under the Rural Wastewater Improvement Project (RWIP) project. All sites to be upgraded under RWIP are agreed with NIEA. The starting position for compliance projections throughout PC15 was based on NIEA's assessment of works as passing or failing in calendar year 2013. Compliance was projected to improve year on year through delivery of works agreed with NIEA for upgrade via the RWIP project.

Line 26 - Delivery of improvements to nominated UIDs as part of a defined programme of work

NI Water has established the process for the identification, monitoring and review of UIDs. This included linking CAR and FD identifiers, developing CPMR to hold all relevant UID information and introducing review steps for all potential UIDs identified. In addition, NIEA have full visibility of the programme and sign off individual outputs within overall schemes: consequently, UIDs are claimed on a rolling basis rather than waiting for overall scheme completion.

The PC15 Final Determination indicated a target of 56 UID improvements for the 6-year period, with 16 of these profiled for delivery in 2016/17. None of these PC15 FD nominated outputs profiled for 2016/17 were delivered between 01 April 2016 and 31 March 2017. 5 PC15 FD UIDs which had been profiled for delivery in 2015/16 were delivered between 01 April 2016 and 31 March 2017.

It is important to note however that NI Water delivered 4 PC13 UIDs in 2016/17 which had originally been profiled for 2014/15.

A further 2 additional UIDs were identified and delivered during 2016/17: these were not included in the PC15 FD and were not PC13 carry-over.
11 UIDs in total were delivered during 2016/17.

Confidence Grades

NI Water has maintained improvements in the reporting process and the cross checking process for this line which were initially implemented for the AIR14 submission. Improvements in the management of Beneficial Use dates were implemented in January 2016 – as these improvements have been in place for a full year, an improvement in the confidence is now considered appropriate. For 2016/17, the confidence grades for this line was determined using the reporting guidance and assessed as A1 – based on sound, time specific data captured relevant to each individual UID.

UIDs Delivered during the second year of PC15 – AIR17 Period

Catchment	UID Address	FD Ref.	Project ID	Comments	Operational Date
Annesborough WWTW	Annesborough Park WwPS	UID032	KS937	Increase Storage	30/06/2016
New Holland WWTW	Antrim St CSO 25	UID069	KT391	Upgrade CSO chamber and install 6mm screens	22/08/2016
Kinnegar WWTW	Palace Barracks CSO 110	UID218	KR480	Closed	07/09/2016
Kinnegar WWTW	Strathearn Court CSO 53	UID220	KR640	Closed	20/12/2016
Armagh WWTW	The Mall East CSO	UID005	KF330	Closed	14/10/2016
Armagh WWTW	English St CSO. Scheme 2	UID006	KF330	Closed	21/01/2017
North Down WWTW	57 Belfast Road CSO 8C	UID263	KS877	Closed	21/03/2017
North Down WWTW	17 Belfast CSO 8D	UID264	KS877	Closed	21/03/2017
Culmore WWTW	Knockalla New WWPS	UID273	KL504	New WWPS which can pump forward 16 l/s. also a new rising main 111m of 160mm and 6mm screens on overflow.	13/09/2016
Culmore WWTW	Manorwood WWPS	UID432	KL527	Close WWPS and install gravity sewer.	01/12/2016
Milltown WWTW	Milltown Road WWPS Upgrade	UID388	KA261	Increase pump rate to meet future Formula A, provide EO storage (2hrs@3DWF) and upsize 150mm diameter to 225mm for a length of 274m.	21/03/2017

Line 27 – Delivery of improvements to WwTW through nominated schemes as part of a defined programme of work

2 WwTW nominated outputs were delivered between 01 April 2016 and 31 March 2017. Blackrock was a PC15 output. The Loup was initially included in the scope of the Rural Wastewater Treatment Works programme. The actual PE of the site has exceeded the 250 PE threshold and a Change Control currently being drafted will re-designate it as a Sub Programme 16 output.

Confidence Grades

NI Water has maintained improvements in the reporting process and the cross checking process for this line which were initially implemented for the AIR14 submission. Improvements in the management of Beneficial Use dates were implemented in January 2016 – as these improvements have been in place for a full year, an improvement in the confidence is now considered appropriate. For 2016/17, the confidence grades for this line was determined using the reporting guidance and assessed as A1 – based on sound, time specific data captured relevant to each individual WwTW.

WwTWs Delivered during the second year of PC15 – AIR17 Period

Project Name	Project Code	Beneficial Use Date	Comments
Blackrock WwTW	KS389	20/10/2016	
The Loup WwTW		15/03/2017	

Line 28 - Investment in improvements to small wastewater treatment works as part of the Rural Wastewater Investment Programme.

Eight small wastewater treatment works achieved Beneficial Use during 2016/17. Details of the actual works and year delivered are listed below.

CAR Site Reference	Project title	Year claimed	Outstanding outputs
S00320	Drumlough	2016/17	
S01462	Glenoe WwTW	2016/17	
S04118	Trench Road	2016/17	
S02111	Acton	2016/17	
S02276	McKinley Park	2016/17	
S01160	Longs Glebe	2016/17	
S01622	Kilross	2016/17	
S02593	Milltown (Aghory)	2016/17	

The confidence grades for this line were determined using the reporting guidance and were assessed as A2, based on the evidence within the methodology and the visibility of programme as defined within the ‘Project Sites’ section on CPMR.

Line 29 - CSO Monitoring

NI Water has adopted a cautious approach to the installation of new technology which has first to be proven to function adequately. To this end, during 2016/17 we identified and procured equipment necessary for trials at 10 CSOs and 20 wastewater pumping stations. It is anticipated that these trials will conclude in 2017/18. We plan to install all necessary monitoring equipment in the PC15 period.

Line 30 – WWTW's upgraded to comply with PPC Regulations

A new compliance measure was introduced for AIR16 for Wastewater Treatment Works upgraded to comply with PPC Regulations. There are currently 29 qualifying works reported for this measure.

Improvement works have been carried out a number of sites under the PC15 Year 1 Base Maintenance Programme. These improvement works include PPC compliance measures such as odour abatement unit media replacement, sludge thickener replacements, refurbishment of sludge import screens, replacement of odour control unit blowers, replacement of sludge holding tanks, additional sludge cake conveyors as back up to the duty system and replacement of poly dosing pumps.

Odour modelling is required to demonstrate what impact, if any, each installation is having on the surrounding environment. Given the cost associated with odour modelling, NIEA has set out their priorities for completion of odour modelling. This requires 24 odour modelling assessments to be undertaken, with 5 sites being assessed by NIEA as not requiring odour modelling.

NI Water has developed a plan for the implementation of PPC requirements for Odour Management. The plan has been prioritised and agreed with NIEA.

Upon completion of the odour modelling, NI Water and NIEA will be in a position to assess each site and determine if the PPC Regulations are satisfied, or if additional investment is required to comply. If so, a work programme will be developed, in conjunction with NIEA, to deliver the necessary improvements to meet PPC Compliance for each site. Until such times, all 24 sites are assessed as non-compliant at this stage.

NI Water Odour Modelling Implementation Plan

WwTW	NIEA Priority	Import site	Phase 1 Target Completion Date	Phase 1 Actual Completion Date	Phase 2 Olfactory Study (If required) Target date	Phase 2 Target Completion Date	Phase 2 Actual Completion Date	Financial Year Completion date	BRAG Status
Dungannon (Moygashel)	1	Yes	Nov-16	Nov-16	Aug/September 16	Nov-16	Nov-16	2016/17	Complete
New Holland (Lisburn)	1	Yes	Nov-16	Nov-16	Aug/September 16	Nov-16	Nov-16	2016/17	Complete
Carrickfergus	1	No	Nov-16	Nov-16	Aug/September 16	Nov-16	Nov-16	2016/17	Complete
Whitehouse	1	No	Nov-16	Nov-16	Aug/September 16	Nov-16	Nov-16	2016/17	Complete
Newcastle	3	No	Mar-17	Mar-17	Aug/September 16	Mar-17	Mar-17	2016/17	Complete
Culmore	2	Yes	Jun-17	31/05/2017	Summer 17	TBC		2017/18	On Target
Ballymena (Tullygarley)	2	Yes	Jun-17	31/05/2017	Summer 17	TBC		2017/18	On Target
Antrim	2	Yes	Jun-17	31/05/2017	Summer 17	TBC		2017/18	On Target
Dunmurry	2	Yes	Jun-17	31/05/2017	Summer 17	TBC		2017/18	On Target
Cookstown	2	Yes	Jun-17		Summer 17	TBC		2017/18	On Target
Glenstall (Ballymoney)	2	Yes	Jun-17		Summer 18	TBC		2018/19	On Target
Limavady	2	Yes	Nov-17		Summer 18	TBC		2018/19	On Target
Downpatrick	2	Yes	Dec-17		Summer 18	TBC		2018/19	On Target
North Coast	3	No	Aug-17		Summer 18	TBC		2018/19	On Target
Enniskillen	3	No	Dec-17		Summer 18	TBC		2018/19	On Target
Omagh	3	No	Feb-18		Summer 18	TBC		2019/20	On Target
Banbridge	3	No	Feb-18		Summer 18	TBC		2019/20	On Target
Larne	3	No	Aug-17		Summer 18	TBC		2019/20	On Target
Tandragee	3	No	Jul-17		Summer 18	TBC		2019/20	On Target
Magherafelt	3	No	Jul-17		Summer 18	TBC		2020/21	On Target
Waringstown	3	No	Mar-18		Summer 18	TBC		2020/21	On Target
Sion Mills	3	No	Mar-18		Summer 18	TBC		2020/21	On Target
Greenisland	3	No	Mar-18		Summer 18	TBC		2020/21	On Target
Ballyclare WwTW	3	No	Mar-18		Summer 18	TBC		2020/21	On Target
Newry	N/A	Yes	N/A	N/A	N/A	N/A	N/A	N/A	Complete
Strabane	N/A	Yes	N/A	N/A	N/A	N/A	N/A	N/A	Complete
Newtownbreda	N/A	No	N/A	N/A	N/A	N/A	N/A	N/A	Complete
Dromore	N/A	No	N/A	N/A	N/A	N/A	N/A	N/A	Complete
Lisnaskea	N/A	No	N/A	N/A	N/A	N/A	N/A	N/A	Complete

Line 31 Impermeable Surface Area

NI Water removed 54,864m2 of impermeable surface water from the combined sewerage system. This was achieved from the completion of four schemes as listed below.

Proj. No.	Project Name	Impermeable Surface removed
KI536	PC15 Sewer Rehabilitation Unplanned	39
KR612	Olympia Leisure Centre Windsor Park Storm Sewer Requisition	34500
KF392	8-20 Sloans Street Dungannon Storm Sewer Extension	16460
KV229	Ben Crom Place, Kilkeel - Storm Sewer Extension	3865
	Total	**54864**

Line 32 - Number of sustainable WwTW solutions delivered (p.e. ≥ 250)

1 WwTW sustainable solution with a P.E. greater than 250 was delivered in 2016/17: this was The Loup WwTW.

The Loup is a refurbished PST / Percolating Filter Bed works with newly added Humus Tanks and Reed Bed with a maximum PE of 315.

Line 33 - Number of sustainable WwTW solutions delivered (p.e. < 250)

1 WwTW sustainable solutions with a P.E. less than 250 was delivered in 2016/17: this was Kilross WwTW.

Kilross is a refurbished PST / Percolating Filter Bed works with newly added Humus Tank and Reed Bed with a maximum PE of 130.

NORTHERN IRELAND WATER LIMITED - ANNNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17a SEWERAGE EXPLANATORY FACTORS

SEWERAGE SUB - AREA EXPLANATORY FACTORS (TOTAL)

	DESCRIPTION	UNITS	DP	1 AREA 1	CG	2 AREA 2	CG	3 AREA 3	CG	4 AREA 4	CG	5 AREA 5	CG	6 AREA 6	CG	7 AREA 7	CG	8 AREA 8	CG	9 Total	CG
A	**SEWERAGE SUB AREAS GENERAL**																				
	Area name:-																				
1	Annual average resident connected population	000	1																	1,506	C3
2	Annual average non-resident population	000	1																	31	C3
3	Volume of sewage collected (daily average)	Ml/d	1																	243	B3
4	Total connected properties	nr	0																	689,178	A2
5	Area of Sewerage District	km^2	0																	13,520	B2
B	**SEWERAGE DATA**																				
6	Total length of sewer	km	0																	15,777	B3
C	**Costs**																				
7	Sewerage: Direct Costs	£000	0																	12,543	
8	Sewerage: Power Costs	£000	0																	3,952	
9	Sewerage: Service Charges	£000	0																	132	
10	Sewerage: General & Support Expenditure	£000	0																	7,518	
11	Sewerage: Functional Expenditure	£000	0																	20,060	

Table 17a Sewerage Explanatory Factors- Sewerage Sub-Area Explanatory Factors

Line 1 - Annual average resident connected population (Total)

The guidance for Table 17a includes the following text:
"Companies must check that the following data are consistent. Companies must explain in the commentary any reasons why this data is not consistent.

- *Annual average resident connected population in table 17a (line 1, 'total' column) plus annual average non-resident population in table 17a (line 2, 'total' column) should equal the total connected population in table 13 (line 10)"*

NI Water has not calculated the Total Annual Average Resident Connected Population independently of the Total Annual Average Non-Resident Population and the Total Connected Population. Instead, the Company has used the consistency check *(above)* to derive the Total Annual Average Resident Connected Population.

- According to AIR17: Table 13: Line 10, the total connected population (comprising resident and non-resident population) is 1,536.699 x 10^3
- According to AIR17: Table 17a: Line 2, the annual average non-resident population is 31.054 x 10^3
- By calculation, the annual average resident connected population = 1,536.699 x 10^3 - 31.054 x 10^3 = **1,505.645 x 10^3**

Significant year on year changes in reported figures including an explanation of any factors that may have influenced the figure

AIR15	Confidence Grade	AIR16	Confidence Grade	AIR17	Confidence Grade
1,494.3 x 10^3	C3	1,500.4 x 10^3	C3	**1,505.6 x 10^3**	**C3**

The estimated annual average resident sewerage connected population has increased from 1,500.4 x 10^3 in AIR16 to 1,505.6 x 10^3 in AIR17, an increase of 5.3 x 10^3 (0.35%).

Confidence Grade

There are two figures associated with the calculation of AIR17: Table 17a: Line 1: Column 9. The first figure is derived from AIR17: Table 13: Line 10 and was allocated a confidence grade of B3. The second figure is derived from AIR17: Table 17a: Line 2: Column 9 and was allocated a confidence grade of C3. Since the lower of the two confidence grades is C3, a confidence grade of **C3** has been allocated to Table 17a: Line 1: Column 9.

Line 2 - Column 9 - Annual average non-resident population (Total)

AIR15	Confidence Grade	AIR16	Confidence Grade	AIR17	Confidence Grade
27.4 x 10^3	C3	29.4 x 10^3	C3	**31.1 x 10^3**	**C3**

NI Water has included holiday and tourist population connected to the sewerage system, averaged over the year.

NI Water has not included any allowance for daily commuters or day visitors.

Changes in Methodology

Each year, NI Water reviews all of the latest tourism publications and adopts a methodology which best utilises the information available at the time.

For AIR16, the Company reverted to its AIR14 methodology when the annual number of non-resident visitor nights (January to December) had still to be published and the best alternative was an estimate, based on the number of non-resident visitor nights for the period October to September.

This year, the outturn for Line 20 has been calculated following the publication of annual tourism statistics for 2016 on 25th May. As such, it has not been necessary to estimate the annual number of non-resident visitor nights in 2016 and the methodology is consistent with the methodology used for AIR15.

For the purposes of calculating the non-resident winter visitor nights, the methodology is still based on the assumption that there is a direct relationship between the occupancy of hotels and guesthouses/B&Bs and visitor nights.

Statement detailing estimation method used including date of data on which estimate is made

The following statistic was derived from Table 1.4 of the NISRA publication *'Northern Ireland Annual Tourism Statistics 2016 Additional Tables'*, available as a download from the NISRA website.

	Date Range	Overall Nights
All Visitors (exc. NI Residents)	Jan 16 – Dec 16	**11,365,623**

The annual average non-resident population was estimated as follows:

11,365,623 / 366 nights = **31,054**

In obtaining the estimated number of visitor nights, NI Water has avoided the assumption specified in the guidance of *'a two-thirds occupancy rate of estimated bed-spaces available for non-residents for four months in the year'*.

Significant year on year changes in reported figures including an explanation of any factors that may have influenced the figures

Last year, the Company reported a Table 17a Line 2 outturn of 29.4 x 10^3. For the purposes of the AIR17 commentary on year on year changes, the AIR16 outturn has been recalculated using updated data for the entire twelve-month period of 2016. The AIR16 revised outturn of 29.3 x 10^3 is 0.31% lower than the reported outturn.

Based on the AIR16 revised outturn, the estimated annual average non-resident sewerage population has increased from 29.3 x 10^3 in AIR16 to 31.1 x 10^3 in AIR17, an increase of 1.8 x 10^3 *(6.13%)*. This increase can be attributed to an increase in the number of non-resident visitor nights. The 2016 estimate was 11,365,623 compared to the 2015 revised estimate of 10,680,185.

According to the NISRA bulletin *'Northern Ireland Annual Tourism Statistics 2016'* published on 25th May 2017, 'the statistics point towards an upward trend in external tourism activity in Northern Ireland between 2011 and 2016.'

From March 2016, Ryanair started operating from Belfast International Airport and has since added numerous routes to various destinations in the UK and Europe. Visitors continue to be influenced to come to Northern Ireland by local visitor attractions, such as

the Giant's Causeway and Titanic Belfast. The local film industry with Game of Thrones showcasing local locations may also have an impact on tourism.

Confidence Grade

The annual average non-resident population is an estimate based on several sources of information:

1. The NISRA publications '*Hotel Occupancy Statistics 2011-2016 Additional Tables*' and *'Guesthouse, Bed and Breakfast and Guest Accommodation Occupancy Statistics 2011-2016 Additional Tables*' provide only an estimate of the monthly numbers of bed-spaces sold, based on the extrapolation of data for a representative sample group of establishments.
2. The NISRA publication *'Northern Ireland Annual Tourism Statistics 2016 Additional Tables'* provides only an estimate of the annual number of non-resident visitor nights, based on sample surveys. The estimate therefore has an associated degree of sampling error, determined both by the sample design and by the sample size. Sample surveys include the Northern Ireland Passenger Survey (NIPS) conducted by the Northern Ireland Statistics and Research Agency (NISRA), the Survey of Overseas Travellers (SOT) conducted on behalf of Fáilte Ireland and the Household Travel Survey (HTS) conducted by Central Statistics Office (CSO).

NI Water has assigned a confidence grade of **C3** to account for known deficiencies in the reliability and accuracy of the reported figure.

Line 3 – Volume of Sewerage Collected

This figure has been copied from AIR17 Table 14 Line 7 – Volume Waste Water Returned.

Line 4 – Total Connected Properties

Northern Ireland Water's (NIW) property data is provided via a data download of the property database tables held within the RapidXtra billing system. The data is then manipulated within Microsoft SQL to produce the Rapid Property Summary Report.

In AIR12 we introduced an automated tool to populate the figure for Table 17a Line 4. (Rapid Property Summary as the input) Our methodology for AIR17 has remained consistent. Further details are in Appendix A.

The difference between the AIR16 and the AIR17 figures is circa 10435. This can be explained by the following;

1. New Connections during the 2016/17 reporting year.
2. Added as a result of a customer contact. E.g. septic tank empty request, no water complaint, blocked sewer etc. Within this category there are 2 scenarios:
    - The adding of properties NI Water allegedly didn't know about and the adding of duplicates as the customers address couldn't be found on Rapid. For example, Rapid may hold the site number but when the customer contacts NI Water they quote the verified postal address which is different, therefore creating a duplicate. Another scenario - The street name may have changed from the time of New Connection to that of customer contact – street names can change in the early stages of site development.
    - The work on data validation has commenced, with new validations 'live' as a result of Phase 1 & 2 implementation, further validations will be implemented in Phase 3 & 3a during 2016/17 & 2017/18.
3. Removal of duplicates/properties as a result of data quality initiatives

4. The increased number of properties within the no water/well water category (further detail provided within the Table 13 Commentary)

In addition to the above, other data quality requirements have been built into the new CBC Contract. They cover all aspects of the property life cycle (creating, amending and demolishing properties) and data degradation will be monitored/measured throughout.

Line 5 - Area of sewerage district

The figure provided equates to the total land mass of Northern Ireland excluding major bodies of inland water. The same LPS product has been used to determine the Area of Sewerage District. There remains only one sewerage district for all of Northern Ireland. The confidence grade of the data will remain the same as the previous year.

Line 6 - Total length of sewer

There has been no change to the structure of the data reported on this year from the previous years that would directly affect the totals provided. The same queries have been used to extract the data from the Corporate Asset Register and have been checked to ensure that they are still relevant. The confidence grade of the data will remain the same as the previous year. Any new data will have adhered to the NIW Code of Practice for the submission of asset data ensuring that data quality levels have been maintained throughout the year.

The overall approach and allocation process for Table 17a has not changed since AIR08. There are still some limitations and it has not been possible to fully complete the Information Returns for 2017. Work is on-going, through the Cost to Serve Project. Cost to Serve is not fully implemented and therefore could not be used for AIR17. The figures populated in Column 9 have been taken from Table 22 (NIW only).

Line 7 – Direct Costs

It is not yet possible to split the costs into areas. A total figure has been supplied in Column 9 which agrees to the direct sewerage costs in Table 22, column 1 line 9. See Table 22 commentary. Direct Costs have decreased by circa £2.1M from AIR16.

The main reason for this was decreased power costs (see below).

Line 8 – Power Costs

The figure for Power costs agrees to Table 22, line 2 column 1. See Table 22 commentary. Power costs have decreased by £1.4M from AIR16 due a reduction in rate and an extended period of dry weather conditions which resulted in decreased usage of power at the wastewater treatment works during 2016.

Line 9 – Services Charges

The figure for Service Charges agrees to Table 22, line 7 column 1. The service charges for sewerage remain similar to previous years and they are in the region of £0.1M.

Line 10 – General & Support

The figure for General & Support expenditure agrees to Table 22, line 10 column 1. See Table 22 commentary and methodology. These costs have decreased by almost £0.3M from AIR 16.

Line 11 – Functional Expenditure

This is a calculated cell and is the total of line 7 and line 10. This figure agrees to Table 22, line 11 column 1. The costs in this line have decreased by approx. £2.4m since AIR 16. This is due to the combination of lower power costs and decreased general and support as explained above.

Annex A

Line 4 - Total Connected Properties

Total properties connected for sewerage services (including voids) at year end.

This figure is taken from the AIR17 Rapid Property Summary, as attached.

Rapid Property Summary - March 20

Total Gross Sewerage Properties	End March 2017
Household - Unmeasured	612707
Household - Sewerage Only	6
Household – Measured - Not Charged (test meters)	161
Household - Measured	34985
Household – Site Meters	698
Household - Unmeasured - Not Charged	16
Non-Household - Unmeasured	13190
Non-Household – Sewerage only	19
Non-Household - Measured	27396
Total	**689178**

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17b SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - LARGE WORKS INFORMATION DATABASE (NIW Only)

	DESCRIPTION	UNITS	DP	TOTAL	1	CG	2	CG	3	CG	4	CG	5	CG	6	CG	7	CG	8	CG	9	CG	10	CG	11	CG	12	CG	13	CG	14	CG
1	Works Name				Belfast		Culmore		Ballymena		Whitehouse		North Coast		Newry		Lisburn		Antrim		Dunmurry		Omagh		Dungannon		Newtownbreda		Carrickfergus		Enniskillen	
A	**WORKS SIZE**																															
2	Population equivalent of total load received	000	0	1,169	361	C5	131	C5	71	C5	88	C5	76	C5	57	C5	70	C5	65	C5	46	C5	33	C5	79	C5	34	C5	32	C5	26	C5
B	**EFFLUENT CONSENT STANDARD**																															
3	Suspended solids consent	mg/l	0		50	A1	50	A1	25	A1	50	A1	50	A1	50	A1	15	A1	20	A1	25	A1	50	A1	40	A1	30	A1	50	A1	30	A1
4	BOD5 consent	mg/l	0		30	A1	30	A1	15	A1	30	A1	30	A1	30	A1	10	A1	10	A1	10	A1	30	A1	25	A1	15	A1	30	A1	20	A1
5	COD consent	mg/l	0		125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1	125	A1
6	Ammonia consent	mg/l	1				10.0	A1	3.0	A1							2.5	A1	15.0	A1	2.5	A1	10.0	A1	7.0	A1	5.0	A1				
7	Phosphates consent	mg/l	1						1.0	A1							2.0	A1	1.0	A1	2.0	A1	2.0	A1	1.0	A1	2.0	A1				
C	**TREATMENT CATEGORY**																															
8	Classification of Treatment Works				TA2		SAS		TA2		TA2		SAS		SAS		TA2		TA2		TA2		TA2		TA2		TA2		TA2		TA2	
D	**COSTS**																															
9	Direct cost	£000	0	6,913	2,530		483		384		286		316		436		465		286		275		244		336		296		246		330	
10	Power costs	£000	0	4,032	1,914		239		214		169		150		224		223		142		114		87		222		120		109		106	
11	Service Charges	£000	0	139	17		12		6		7		7		10		14		8		10		10		9		9		9		11	
12	General and support expenditure	£000	0	3,633	453		301		167		177		187		260		371		200		258		270		238		230		241		281	
13	Functional expenditure	£000	0	10,546	2,983		784		551		463		503		696		836		485		533		514		574		526		487		611	
14	Estimated terminal pumping costs	£000	0	0	0		0		0		0		0		0		0		0		0		0		0		0		0		0	
15	Estimated sludge costs	£000	0	0	0		0		0		0		0		0		0		0		0		0		0		0		0		0	

Table 17b – Sewerage Explanatory Factors (NIW only)
Sewage Treatment Works – Large Works Information Database

Lines 1 - 8 - Works Size, Effluent Consent Standards and Category

NI Water has a number of sites that fall into the Band 6 category and are to be reported within this submission.

The WWTW to be reported on for AIR17 are:

LIMS Code	LIMS Name	Confirmed PE	AIR15 Band	BOD WOC	BOD UWWTR
S34AG	Carrickfergus WWTW	32474	Band 6	30	25
S34AK	Belfast WWTW	360602	Band 6	30	25
S37AB	Dunmurry WWTW	46042	Band 6	10	25
S37AA	Lisburn (New Holland) WWTW	69742	Band 6	10	25
S34AD	Newtownbreda WWTW	34497	Band 6	15	25
S34AE	Whitehouse WWTW	87930	Band 6	30	25
S15AO	Antrim (Milltown) WWTW	65282	Band 6	10	25
S13BE	Ballymena (Tullygarley) WWTW	70948	Band 6	15	25
S25AC	Dungannon (Moygashel) WWTW	79331	Band 6	25	25
S27AC	Newry WWTW	56605	Band 6	30	25
S45IB	Omagh WWTW	33245	Band 6	30	25
S43CI	Culmore WWTW	131123	Band 6	30	25
S17HF	North Coast WWTW	76036	Band 6	30	25
S47HK	Enniskillen WWTW	26231	Band 6	20	25

No assumptions have been made for the return.

All consents reported have both BOD and SS as part of the consent as issued by Northern Ireland Environment Agency (NIEA).

There are no consents for ammonia by itself without accompanying BOD and SS consents.

The consent conditions as issued by NIEA are based on 95%ile limits.
For the purposes of reporting the WOC BOD limit has been reported for all WWTW's. It should be noted that in some instances, the UWWTR BOD limit of 25mg/l is lower, as identified in the table above.

For reference, the works in Band 5 that have the potential to be included in subsequent returns are listed here:

LIMS Code	LIMS Name	Confirmed PE	AIR 14 Band
S36AA	Downpatrick	19657	Band 5
S34AH	Greenisland	12529	Band 5
S36BB	Kilkeel	13852	Band 5
S36BO	Newcastle	16227	Band 5

LIMS Code	LIMS Name	Confirmed PE	AIR 14 Band
S15BS	Larne	23175	Band 5
S17ED	Ballycastle	12797	Band 5
S15AA	Ballyclare	16352	Band 5
S17BP	Ballymoney	21153	Band 5
S13CH	Cookstown	20014	Band 5
S13GK	Magherafelt	17453	Band 5
S27AA	Banbridge	21733	Band 5
S25AB	Coalisland	10107	Band 5
S27AN	Tandragee	11686	Band 5
S27AD	Warrenpoint	14871	Band 5
S43GI	Limavady	16321	Band 5
S45JA	Strabane	22191	Band 5

D Costs

This table was populated in the same way as AIR16. The costs are a further breakdown by location of the Band 6 expenditure detailed in Table 17f line 6. It is populated with the information available for the year ended 31st March 2017. The Population Equivalent (PE) information used to complete this table was received from Asset Management on 25 May 2017. No PPP costs are included in this table.

Line 9 – Direct Costs

Direct costs include power 521x, contractors 531x, other contractors 532x, materials 541x, chemicals 548x, cost reallocations 611x (this includes direct labours costs and & overhead charges) and service charges.

In AIR17 there are 14 works that fall into Band 6 whereas in AIR16 there were 13. Enniskillen was included in Band 5 in AIR16 whereas in AIR17 it is included in Band 6.

Direct costs are in line with costs from AIR16. This is mainly due to the extra works included in Band 6 being offset by a decrease in Power costs.

Line 10 – Power Costs

Through the cost to serve project all power costs are allocated to individual sites and a report was taken from EAM to get the full year power cost per WWTW's. The power costs have decreased in AIR17 by £0.6M which was due to a decrease in rate and an extended period of dry weather which resulted in lower pumping costs.

Belfast WWTW's was treated separately as there is one electricity meter at Duncrue Street which includes the costs for the Belfast WWTW's and the two Incinerators operated by PPP. The power team supplied an estimated 46:54 split between the Belfast WWTWs and the Incinerators (based on an estimated KWhr usage and a number of sub-meters) which has been used to calculate the amount relating to Sewage Treatment at Belfast WWTW's. The split in AIR16 was 44:56 for the Belfast and Incinerators. No costs for the Incinerator have been included in this table in AIR17.

Line 11 – Service Charges

Service Charges in AIR17 remain consistent with AIR16.

Line 12 – General & Support

The total general & support expenditure was taken from Table 22 line 10 column 2 (see Table 22 methodology and commentary). This figure was apportioned across all the WWTWs in this table based on the cost reallocations 611X (this includes direct labours costs & overhead charges). This figure has increased by £0.8m since AIR16. See commentary on Table 22 for further breakdown and explanation.

Line 13 – Functional Expenditure

This is a calculated line and is the total of line 9 and line 12. The total in the workings agrees to Table 22 (NIW Only) column 2 line 11. Costs have increased since AIR16 by £0.8M mainly due to the additional general & support costs incurred in 16/17 as explained above.

Line 14 – Terminal Pumping Costs

This information was populated in the same way as AIR16. No Power costs for Terminal Pumping Stations have been included in the table.

Line 15 – Sludge Costs

Sludge treatment is a separate activity in the accounts and the direct costs are not included in line 9 to line 13.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17c SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - NUMBERS (NIW Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										TOTAL
					SECONDARY		TERTIARY				SEA OUTFALLS			
				PRIMARY	ACTIVATED	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	
A	**SMALL WORKS**													
1	Number of STWs in size band 1	nr	0	237	21	513	0	0	3	2	0	0	5	781
2	Number of STWs in size band 2	nr	0	0	5	31	3	2	8	7	1	1	0	58
3	Number of STWs in size band 3	nr	0	1	13	47	7	12	15	7	1	0	1	104
4	Number of STWs in size band 4	nr	0	1	15	7	1	15	2	5	3	1	0	50
5	Number of STWs in size band 5	nr	0	0	4	0	2	8	0	1	1	0	0	16
B	**LARGE WORKS**													
6	Number of STWs in size band 6	nr	0	0	3	0	0	11	0	0	0	0	0	14
7	Total numbers of STWs	nr	0	239	61	598	13	48	28	22	6	2	6	1,023
C	**SMALL WORKS WITH AMMONIA CONSENTS**													
8	Number of small STWs with NH_3 consent (5 - 10mg	nr	0	44										
9	Number of small STWs with NH_3 consent (< = 5mg	nr	0	61										

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17c SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - NUMBERS (PPP Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										TOTAL
				PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS			
					ACTIVATED	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	
A	SMALL WORKS													
1	Number of STWs in size band 1	nr	0											0
2	Number of STWs in size band 2	nr	0											0
3	Number of STWs in size band 3	nr	0											0
4	Number of STWs in size band 4	nr	0				1							1
5	Number of STWs in size band 5	nr	0					1						1
B	LARGE WORKS													
6	Number of STWs in size band 6	nr	0		0			3						4
7	Total numbers of STWs	nr	0	0	0	1	1	4	0	0	0	0	0	6
C	SMALL WORKS WITH AMMONIA CONSENTS													
8	Number of small STWs with NH3 consent (5 - 10m	nr	0	0										
9	Number of small STWs with NH3 consent (< = 5mg	nr	0	2										

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17c SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - NUMBERS (Total)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										TOTAL
					SECONDARY		TERTIARY				SEA OUTFALLS			
				PRIMARY	ACTIVATED	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	
A	**SMALL WORKS**													
1	Number of STWs in size band 1	nr	0	237	21	513	0	0	3	2	0	0	5	781
2	Number of STWs in size band 2	nr	0	0	5	31	3	2	8	7	1	1	0	58
3	Number of STWs in size band 3	nr	0	1	13	47	7	12	15	7	1	0	1	104
4	Number of STWs in size band 4	nr	0	1	15	7	2	15	2	5	3	1	0	51
5	Number of STWs in size band 5	nr	0	0	4	0	2	9	0	1	1	0	0	17
B	**LARGE WORKS**													
6	Number of STWs in size band 6	nr	0	0	3	1	0	14	0	0	0	0	0	18
7	Total numbers of STWs	nr	0	239	61	599	14	52	28	22	6	2	6	1,029
C	**SMALL WORKS WITH AMMONIA CONSENTS**													
8	Number of small STWs with NH3 consent (5 - 10m	nr	0	44										
9	Number of small STWs with NH3 consent (< = 5mg	nr	0	63										

Table 17c- Sewage Treatment Works Numbers

NIW only

It should be noted that the banding of the WWTWs is based on the latest Populations Equivalents minus tourist PEs (i.e. hotels and caravan parks only as information does not exist on proportion of PE to commuters). PEs for 98 WWTWs (which were live during AIR17) have been updated.

Changes regarding WWTWs from the AIR16 period are as follows:

- 2 WWTWs has been rationalised to larger WWTWs in the last financial year – i.e. Blackrock Retention Tank (Down) is pumped to Kilkeel WWTWs; Riverside (16-20) is pumped to Portglenone WwTW via Glenone WwPS.
- 9 WWTWs had work carried out under the RWWIP project, with 'turn of flow' being achieved within the AIR17 period – namely upgrades to Acton, Drumlough, Glenoe, Long Glebe, McKinley Pk, Milltown (Aghory) and Trench Rd (66-70) WWTWs and refurbishment to Kilross and The Loup WWTWs)
- Limestone (1) is shown as In Service on the CAR list for this year but was not live for AIR 16. It has been confirmed that although the septic tank serves only one house, NI Water still holds the consent for this works and to date has been unable to have it revoked. As of 31/03/2017, NIW holds the consent and as such is responsible for it and it therefore is live for AIR17.

The above results in a net reduction of 1 WWTWs from AIR16 reporting, with 1023 WWTWs live on 31st March 2017.

The total number of WWTWs in Table 17c line 7 is the total of all works in this table i.e. 1,023 including the screened outfalls (2 No.) and the unscreened outfalls (6 No). The number of WWTWs in Table 15 line 8 is 1,015 as the screened and unscreened outfalls are not to be included in the total for this line.

The NIAUR Chapter 17c guidance also requests the following crosscheck to be carried out, which has been completed:

- The number of large WWTWs in each treatment category in table 17c (line 6, columns 1-10) should equal the corresponding total number of large WWTWs reported in table 17b (line 8) – which for AIR17 is 14 No WWTWs.

It should be noted that the AIR17 PEs, used to populate tables 17c and 17d, were forwarded to others within the organisation who are responsible for the population of tables 17b and 17f, which should ensure consistency of reporting.

The Reporters report for AIR09 recommended that the difference in the total population used to calculate the size bands and the population given in Table 13 Line 10 should be investigated and consideration given to a harmonised approach. The table below shows the AIR17 comparison between the two figures.

Total Residential Population used to Calculate Table 17c for AIR17	1,246,427
Total Population connected to the sewerage system based on Table 13 Line 10	1,536,699
Difference	**290,272**

As can be seen there is a difference of 290,272. However, the Table 17c information does not include the residential population within PPP catchments. An exercise was carried out

during February 2012 to establish a Theoretical Desktop PE for the PPP sites and these have been updated with the latest AIR17 Trade PE. The non-residential aspect of these PE have been subtracted from the overall AIR17 PPP PE (based on the reported AIR17 PPP BOD Load and divided by 60g/head/day).

Name of WWTWs	Equivalent Population (From PPP Section)	Non-Residential PE held against PPP Catchments (Includes Non-Residential, Trade, Schools, Large Water Consumers, Caravan Parks)	Residential Population (Based on PPP Equivalent Population. Includes Residential Homes)
North Down WWTW	69,132	9,862	59,270
Armagh WWTW	17,850	8,252	9,598
Richhill WWTW	2,455	229	2,226
Newtownards (Ballyrickard)	39,035	14,093	24,942
Ballynacor WWTW	117,672	56,329	61,343
Kinnegar	79,574	34,681	44,893
Total	**325,718**	**123,446**	**202,272**

As can be seen the residential population for the PPP sites is now approximated to be 202,272. If this is added to the 17c figure (1,246,427) then the total is 1,448,699, which is 88,000 less than the figure held in Table 13. However, the Table 13 Line 10 residential figure includes nursing homes and tourist population. Nursing homes are included in the Trade PE so if this element (3913) and the AIR17 tourist population for both NIW sites (33,318 PE) and PPP sites (1,964) are included this gives a revised figure of 1,487,894 which is 48,805 PE less than the figure held in Table 13, approximately 3.2% of a difference.

It should be noted that the Residential PE for most of the NIW WWTWs has been derived from GIS pointer data and that inaccuracies do exist in that some residential properties are labelled as commercial or industrial, and visa-versa.

The AIR11 Reporter's Report stated '***The Asset Performance team collates all information into the central spreadsheet from which Band Size for each WwTW can be assessed and any changes highlighted. The size banding of each works is added manually. For AIR12, we consider this process should be automated, for the avoidance of any misrepresentation.'*** Hence, NIW has incorporated a means within the central spreadsheet to automate this process.

The Reporters report for AIR09 recommended that a consistent approach for population figures used in the 17 series tables should be adopted. The population figures used in Table 17c are the same as in 17d. These figures have also been supplied to the other parts of the business which populate Tables 17a, 17b & 17f etc., so population figures should be consistent.

With reference to the WWTWs in Size Band 1:

- the number of WWTWs with a PE less than or equal 100 (excluding tourist PE) is 698, and
- the number of WWTWs with a PE greater than 100 but less than or equal to 250 (excluding tourist PE) is 83.

The table below highlights the changes in band sizes from AIR16 to AIR17

Name of Works	CAR ID	AIR16 Band Sizes	AIR17 Band Sizes	Comment
Blackrock Retention Tank(Down)	S00306	Band 1	Pump away	Pumpaway to Kilkeel WwTW
Dundrum(Down)	S00297	Band 3	Band 4	A population study was carried out for this site, there were discussions with NIEA and an updated PE agreed for AIR17.
Enniskillen	S03218	Band 5	Band 6	PE updated with AIR17 Trade Information
Limestone(1)	S03164	N/A	Band 1	It has been confirmed that although the septic tank serves only one house, NI Water still holds the consent for this works and to date has been unable to have it revoked.
Riverside(16-20)	S02029	Band 1	Pump away	Rationalisation of Riverside (16-20) to Portglenone WwTW
The Loup WwTW	S01588	Band 1	Band 2	Following a population study by a consultant APT was requested to adopt the PE.

It should be highlighted that for AIR14 NIW re-assessed the treatment categories for a number of sites. This followed a query from NIW with OFWAT as to the definition of what constitutes a tight consent. At this time it was confirmed that a company is given a tight consent if it has a Suspended Solids consent of less than or equal to 30mg/l AND a BOD of less than or equal to 20mg/l. In addition, a company is given a tight consent if its ammonia consent is less than or equal to 5mg/l.

The AIR definition on treatment categories states that Tertiary A2 can be defined as *Works with a secondary activated sludge process whose treatment methods also include* ***nutrient control using physic-chemical and biological methods****.* Likewise, Tertiary B2 can be defined as *Works with a secondary biological process whose treatment methods also include* ***nutrient control using physic-chemical and biological methods.***

NIW has historically oversized secondary assets to meet tight ammonia consents and it is now felt that this falls within the definition of Tertiary Treatment described above i.e. ***nutrient control using physic-chemical and biological methods.*** In total NIW re-designated the treatment category for 33 WWTWs based on this definition for AIR14, changing 22 WWTWs from Sec Act to Ter A2 & 11 from Sec Bio to Ter B2. The treatment categories for these sites remain unchanged, following a review of the ammonia consents and treatment methods for AIR16. In line with the AIR15 Reporter's Recommendation No 33 (Table 17c S7) NI Water will monitor the possible impact of this interpretation of tertiary treatment in future reporting.

The table below highlights the changes in treatment category from AIR16 to AIR17.

Name of Works	CAR ID	AIR16 Treatment Category	AIR17 Treatment Category	Comment
Acton WwTW	S02111	Sec Act	Sec Bio	Upgraded during AIR17 under RWwIP.
Blackrock Retention Tank(Down)	S00306	Sea Out Unscreen	Pumpaway	Pumpaway to Kilkeel WwTW
Drumlough	S00320	Sec Act	Sec Bio	Upgraded during AIR17 under RWwIP.
Kilross	S01622	Sec Bio	Ter B1	Refurbished/Upgraded during AIR17 under RWwIP.
Limestone(1)	S03164	N/A	Prim	It has been confirmed that although the septic tank serves only one house, NI Water still holds the consent for this works and to date has been unable to have it revoked.
Riverside(16-20)	S02029	Sec Bio	Pumpaway	Rationalisation of Riverside (16-20) to Portglenone WwTW
The Loup	S01588	Sec Bio	Ter B1	Refurbished/Upgraded during AIR17 under RWwIP.

Difference between AIR16 and AIR17 for total in Table 17c (column 11, row 7)

Total Number of Works for AIR 16 -	**1,024**
Total Number of Works for AIR 17 -	**1,023**
Total Difference -	**1**

With reference to lines 8 and 9, data regarding the ammonia consents of the Small WWTWs was obtained from a spreadsheet of standards obtained from the Environmental Regulation Team.

Changes to lines 8 and 9 of this table, from AIR16 to present are summarised below:

Line	Nr AIR16	Nr AIR17	Difference	Comment
8	45	44	1	Enniskillen WWTWs is removed due to the change in Band Size from 5 in AIR16 to 6 in AIR17 Feeny WWTWs is removed from Line 8 due to its ammonia consent changing from 8 to 5 and is added to line 9 for AIR17. Forkhill WwTW is added due to its ammonia consent changing from 12 in AIR16 to 8 for AIR17 Net change - one
9	61	61	0	Feeny WWTWs is added to Line 9 due to its ammonia consent changing from 8 to 5 and is removed from line 8 for AIR17. Nixon's Corner is removed due to its ammonia consent being removed. Net Change - zero

It is to be noted that NIEA did not previously recognise the AIR15 PEs for the WWTWs in the table below, and will probably not recognise the updated AIR17 PEs for these sites, for compliance reporting. They view the PEs in the last column of the table as the PEs to be used for the latter. NIEA require daily flow and load studies for a full year to substantiate drops in PE, which cross UWWTD boundaries i.e. 2000PE, 50,000PE and 100,000PE. These flow and load studies were not identified in the PC15 Business Plan submission and given the reduction in funding over the first 2 years of PC15 they are not currently prioritised for inclusion in the capital works programme.

WWTWs	Site ID	AIR17 Actual PE	Actual PE recognised by NIEA
Ballymena (WWTW)	S01456	70,948	113825
Dromore (Tyrone)	S03083	1917	2032
Dunmurry	S00346	46,042	53605

PPP

Lines 1-6

The loading on the PPP WwTW has not altered from AIR16 period reporting, even though the Richhill WwTW could be assessed as a Band 3 due to current BOD loading.

Line 9

The loading on the PPP WwTW has altered from AIR16 period reporting, this has caused the BOD loading for Richhill to fall just within Band 3 while previously being classified as Band 4. However, NI Water has retained its previous classification, as the asset has not been changed.

Specific required commentary;

- There are no doubts about the classification of any of the PPP works.
- The data is consistent with the data provided on Table 15 Line 8 (PPP Only) table.
- Based on the calculated loads treated at the PPP sewage works in the AIR 17 Reporting period, there are no size band 1 PPP works on which to provide extra detail.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17d SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - LOADS (NIW Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11	
				TREATMENT CATEGORY										TOTAL	CG
				PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS				
					ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED		
A	SMALL WORKS														
1	Load received by STWs in size band 1	kg BOD_5/day	0	137	87	1,408	0	0	62	25	0	0	32	1,752	C3
2	Load received by STWs in size band 2	kg BOD_5/day	0	0	121	677	61	34	176	163	248	69	0	1,549	C3
3	Load received by STWs in size band 3	kg BOD_5/day	0	91	1,020	2,668	422	816	994	455	42	0	55	6,563	C3
4	Load received by STWs in size band 4	kg BOD_5/day	0	350	3,473	1,372	130	4,163	323	1,314	778	193	0	12,096	C3
5	Load received by STWs in size band 5	kg BOD_5/day	0	0	3,822	0	1,786	8,800	0	1,047	768	0	0	16,222	C3
B	LARGE WORKS														
6	Load received by STWs in size band 6	kg BOD_5/day	0	0	15,826	0	0	54,379	0	0	0	0	0	70,205	C3
7	Total loads rec'd (daily average all size bands)	kg BOD_5/day	0	578	24,348	6,124	2,399	68,193	1,556	3,004	1,836	262	87	108,387	C3
C	SMALL WORKS WITH AMMONIA CONSENTS														
8	Load rec'd by small STW w. NH_3 consent (5 - 10mg	kg BOD_5/day	0	5,021											
9	Load rec'd by small STW w. NH_3 consents (< = 5m	kg BOD_5/day	0	14,251											

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17d SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - LOADS (PPP Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11	
				TREATMENT CATEGORY											
				PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS			TOTAL	CG
					ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED		
A	SMALL WORKS														
1	Load received by STWs in size band 1	kg BOD5/day	0												
2	Load received by STWs in size band 2	kg BOD5/day	0												
3	Load received by STWs in size band 3	kg BOD5/day	0												
4	Load received by STWs in size band 4	kg BOD5/day	0				117							117	B3
5	Load received by STWs in size band 5	kg BOD5/day	0					845						845	B3
B	LARGE WORKS														
6	Load received by STWs in size band 6	kg BOD5/day	0	0	4,774	0	0	14,430	0	0	0	0	0	19,204	B3
7	Total loads rec'd (daily average all size bands)	kg BOD5/day	0	0	4,774	0	117	15,275	0	0	0	0	0	20,166	B3
C	SMALL WORKS WITH AMMONIA CONSENTS														
8	Load rec'd by small STW w. NH3 consent (5 - 10m	kg BOD5/day	0	0											
9	Load rec'd by small STW w. NH3 consents (< = 5m	kg BOD5/day	0	962											

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17d SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - LOADS (Total)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11	
				TREATMENT CATEGORY											
					SECONDARY		TERTIARY				SEA OUTFALLS				
				PRIMARY	ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	TOTAL	CG
A	SMALL WORKS														
1	Load received by STWs in size band 1	kg BOD5/day	0	137	87	1,408	0	0	62	25	0	0	32	1,752	C3
2	Load received by STWs in size band 2	kg BOD5/day	0	0	121	677	61	34	176	163	248	69	0	1,549	C3
3	Load received by STWs in size band 3	kg BOD5/day	0	91	1,020	2,668	422	816	994	455	42	0	55	6,563	C3
4	Load received by STWs in size band 4	kg BOD5/day	0	350	3,473	1,372	247	4,163	323	1,314	778	193	0	12,213	C3
5	Load received by STWs in size band 5	kg BOD5/day	0	0	3,822	0	1,786	9,645	0	1,047	768	0	0	17,067	C3
B	LARGE WORKS														
6	Load received by STWs in size band 6	kg BOD5/day	0	0	20,600	0	0	68,809	0	0	0	0	0	89,409	C3
7	Total loads rec'd (daily average all size bands)	kg BOD5/day	0	578	29,122	6,124	2,516	83,468	1,556	3,004	1,836	262	87	128,553	C3
C	SMALL WORKS WITH AMMONIA CONSENTS														
8	Load rec'd by small STW w. NH3 consent (5 - 10m	kg BOD5/day	0	5,021											
9	Load rec'd by small STW w. NH3 consents (< = 5m	kg BOD5/day	0	15,213											

Table 17d - Sewage Treatment Works Loads

NIW only

It should be noted that the banding of the WWTWs is based on the latest Populations Equivalents minus tourist PEs (i.e. hotels and caravan parks only as information does not exist on proportion of PE to commuters). PEs for 98 WWTWs (which were live during AIR17) have been updated.

The allowance for the tourist population, which has been deducted for the purposes of band size determination, has been the proportion of PE allocated to hotels, and caravan and tent pitches only. No deduction has been made for commuters; as such information has not been captured.

The loads reported in this table are the sums of the loads received by each WWTWs or outfall in each particular category, and hence include the proportion of PE allocated to hotels, and caravan and tent pitches. Hence, the loads reported in this table include the non-resident population.

1,024 WWTWs were reported on in Table 17d for AIR16. There has been an overall net reduction of 1 in the number of WWTWs being reported from AIR16 to AIR17, which is summarised as follows:

- 2 WWTWs has been rationalised to larger WWTWs in the last financial year – i.e. Blackrock Retention Tank (Down) is pumped to Kilkeel WWTWs; Riverside (16-20) is pumped to Portglenone WwTW via Glenone WwPS.
- 9 WWTWs had work carried out under the RWWIP project, with 'turn of flow' being achieved within the AIR17 period – namely upgrades to Acton, Drumlough, Glenoe, Long Glebe, McKinley Pk, Milltown(Aghory) and Trench Rd(66-70) WWTWs and refurbishment to Kilross and The Loup WWTWs)
- Limestone (1) is shown as In Service on the CAR list for this year but was not live for AIR 16. It has been confirmed that although the septic tank serves only one house, NI Water still holds the consent for this works and to date has been unable to have it revoked. As of 31/03/2017, NIW holds the consent and as such is responsible for it and it therefore is live for AIR17.

Trade effluent information was obtained from NIW's Trade Effluent Section, for each individual consented trader, which enabled easy conversion to PEs. The COD: BOD conversion factor of 2:1 was not used, as more accurate flow based information was available to the Trade Effluent Section.

The Water and Sewerage Services (NI) Order 2006 designated that the discharge from hospitals, nursing homes & clinics should no longer be considered as Trade Effluent, therefore for AIR17 these have been removed from the Trade Effluent Submission. For the majority of hospitals a certain % of hospital discharges (as calculated by NIW's Trade Effluent Section) has been included due to discharges from x-ray departments and bathing pools. The AIR11 Trade Information, for nursing homes and clinics, has been maintained for AIR17 in order to allow for this proportion of the influent entering the WWTWs. Similarly, the PEs for the hospitals has been factored up to 100% of their total discharge to give a more accurate figure of load discharging to the sewerage network.

In AIR13, it was reported that flow & load information was validated for Belfast and a figure of 365,000Pe was agreed. This figure has been updated for AIR17 with the latest trade information giving a new figure of 360,602 PE. However it should be noted that there are a

number of projects currently been carried out for NIW that are investigating the PEs discharging to Belfast and early indications would suggest the equivalent PE discharging to the WWTWs is much higher than currently stated. The main projects involved are:

- Belfast WwTW Appraisal Study (which includes a full 12 month flow and load study). The study is due to be completed in the Spring of 2018 ,
- Glenmachan Sewers Project, and
- Compliance with the Surface Water (Shellfish) Regs (NI) – Belfast Lough.

The outcomes of these projects are likely to influence the PE for Belfast for AIR18 but a full flow and load assessment may not be completed and accepted by NIEA until AIR19.

The total number of WWTWs in Table 17c line 7 is the total of all NIW only works in this table i.e. 1,023 including the screened outfalls (2 No.) and the unscreened outfalls (7 No.).

The Reporters Report on AIR09 recommended that NIW correct possible overestimation of total WWTW loads due to the inclusion of offices/commercial premises. The majority of the residential and non-residential element of PEs used to calculate tables 17c and 17d was based on Pointer information from MapInfo.

However, it should be noted that the non-residential element of Pointer is made up of both commercial and unknown properties. At this present time it is not known what proportion of the unknowns are actually residential and which are non-residential and therefore it has been decided to include both elements when calculating the PEs for the band sizes.

It is difficult to estimate the proportion of load at a WWTW due to commuters, or the load that should be deducted from/added to a particular WWTW due to population commuting out of/into the catchments, which that WWTW serves. Hence, no allowance to WWTWs loads has been made either way for Table 17d.

The confidence grades of the data in lines 1 - 7 remain as C3 as stated in AIR16.

The AIR11 Reporter's report stated '***We suggest that NI Water consider comparing the results from the ongoing programme of flow and load surveys against the previous assumptions for each site to determine if there is a statistically significant difference which should be extrapolated into the larger population of WwTW sites.'***

There was some analysis on this within the AIR13 commentary however, it was concluded that there was not a large enough sample to justify extrapolating the differences. Since AIR13, only one additional Flow & Load PE has been adopted and this was for Kilkeel WWTWs and therefore the sample is still not large enough to extrapolate.

The reporter also recommended in AIR11 that significant variances in load of WWTWs (i.e. greater than 15%) should be investigated. Below is a table detailing these sites and the reason for the change in PEs. There are 11 no. WWTWs included in the table.

Name of Works	CAR ID	AIR16 Actual PE	AIR17 Actual PE	Difference* *(-ve indicates AIR17 figure larger)	Comments
Blackrock Retention Tank(Down)	S00306	249	Pump away	249	Pumpaway to Kilkeel WwTW
Dundrum (Down)	S00297	1674	2243	-569	A population study was carried out for this site, there were discussions with NIEA and an updated PE agreed for AIR17.
Dungannon	S02850	94502	79331	15171	PE updated with AIR17 Trade Information
Edenreagh Rd(39-41)	S04094	15	33	-18	A population study was carried out for this site, reviewed, and adopted for AIR17.
Gortaclady WwTW	S01575	18	44	-26	
Kiltubbrid	S002588	33	23	10	
Limestone(1)	S03164	0	3	-3	It has been confirmed that although the septic tank serves only one house, NI Water still holds the consent for this works and to date has been unable to have it revoked.
Moneyglass	S01423	145	126	19	A population study was carried out for this site, reviewed, and adopted for AIR17.
Mossvale Terrace	S02153	36	30	6	
Riverside(16-20)	S02029	12	0	12	Rationalisation of Riverside (16-20) to Portglenone WwTW
Rosscor	S03212	15	8	7	A population study was carried out for this site, reviewed, and adopted for AIR17.

***(-ve indicates AIR17 figure larger)**

It should be highlighted that for AIR14 NIW re-assessed the treatment categories for a number of sites. This followed a query from NIW with OFWAT as to the definition of what constitutes a tight consent. At this time it was confirmed that a company is given a tight consent if it has a Suspended Solids consent of less than or equal to 30mg/l AND a BOD of less than or equal to 20mg/l. In addition, a company is given a tight consent if its ammonia consent is less than or equal to 5mg/l.

The AIR definition on treatment categories states that Tertiary A2 can be defined as *Works with a secondary activated sludge process whose treatment methods also include* ***nutrient***

control using physic-chemical and biological methods*.* Likewise, Tertiary B2 can be defined as *Works with a secondary biological process whose treatment methods also include* ***nutrient control using physic-chemical and biological methods.***

NIW has historically oversized secondary assets to meet tight ammonia consents and it is now felt that this falls within the definition of Tertiary Treatment described above i.e. ***nutrient control using physic-chemical and biological methods.*** In total NIW re-designated the treatment category for 33 WWTWs based on this definition for AIR14, changing 22 WWTWs from Sec Act to Ter A2 & 11 from Sec Bio to Ter B2. The treatment categories for these sites remain unchanged, following a review of the ammonia consents and treatment methods for AIR17.

NIW has a number of WWTWs (Belfast, Whitehouse and Carrickfergus) which have a total nitrogen (TN) standard in place, which is applicable to marine discharges, as opposed to an ammonia standard, which is applied to freshwater discharges. Treatment category TA2 is applicable to these WWTWs as nutrient control is in place through the biological process.

The total load of 108386.9kg BOD/day from all NIW (only) WWTWs reconciles with the Total load entering sewerage system (BOD/year) of 39561.21 *t BOD/year*, from Table 15 line 5.

The Total load receiving primary treatment in table 17d (line 7, column 1) of 578.1 kg BOD/day is consistent (allowing for rounding up/down and conversions) with total load receiving primary treatment in table 15 (line 3) of *211.00 t BOD/yr.*

The Total load receiving secondary and tertiary treatment in table 17d (line 7, sum of columns 2–7) i.e. 105624.4 kg BOD/day is consistent (allowing for rounding up/down and conversions) with total load receiving secondary treatment in table 15 (line 2) i.e. 38552.87 *t BOD/yr*.

The Total load receiving preliminary treatment in table 17d (line 7, column 8) of 1835.5 kg BOD/day is consistent (allowing for rounding up/down and conversions) with total load receiving preliminary treatment in table 15 (line 4) (both include non-resident population) of 669.96 *t BOD/yr.*

The table below depicts changes in PEs at WWTWs from AIR16 to AIR17.

The following table depicts how PE changes have occurred at WWTWs during the last financial year. **Band size changes are in bold.**

Name of Works	CAR ID	AIR16 Actual PE	AIR17 Actual PE	Difference*	AIR16 Band	AIR17 Band
Annahilt	S00317	1751	1750	1	Band 3	Band 3
Annalong (WWTW)	S00300	3252	3222	30	Band 4	Band 4
Annsborough	S02687	5879	5882	-3	Band 4	Band 4
Antrim (WWTW)	S01422	65902	65282	620	Band 6	Band 6
Ardggarvan	S02987	151	164	-13	Band 1	Band 1
Ardglass (WWTW)	S00268	2757	2866	-109	Band 4	Band 4
Augher	S03002	558	570	-12	Band 3	Band 3
Ballyclare	S01467	16466	16352	114	Band 5	Band 5
Ballykelly (L/Derry)	S03016	3669	3651	18	Band 4	Band 4
Ballykinler (WWTW)	S00299	1672	1655	17	Band 3	Band 3
Ballylumford Cottages (WWTW)	S00260	61	54	7	Band 1	Band 1
Ballymena (WWTW)	S01456	69915	70948	-1033	Band 6	Band 6
Ballynahinch (Down)	S00311	7942	7936	6	Band 4	Band 4
Banbridge (WWTW)	S02102	22753	21733	1020	Band 5	Band 5
Bar Hall	S00229	27	22	5	Band 1	Band 1
Belfast (WWTW)	S00345	364383	360602	3781	Band 6	Band 6
Blackrock Retention Tank(Down)	S00306	249	Pumpaway	249	Band 1	Pumpaway

Name of Works	CAR ID	AIR16 Actual PE	AIR17 Actual PE	Difference*	AIR16 Band	AIR17 Band
Bohulkin	S03029	9	7	2	Band 1	Band 1
Bushmills (WWTW)	S01178	5541	5542	-1	Band 4	Band 4
Carrickfergus (WWTW)	S00261	32676	32474	202	Band 6	Band 6
Castlederg (WWTW)	S03042	3908	3902	6	Band 4	Band 4
Cladymore	S02566	211	195	16	Band 1	Band 1
Coalisland	S02828	10074	10107	-33	Band 5	Band 5
Coneyisland	S00848	99	96	3	Band 1	Band 1
Cookstown (WWTW)	S01582	19771	20014	-243	Band 5	Band 5
Corry	S03063	12	6	6	Band 1	Band 1
Culmore (WWTW)	S03071	131455	131123	332	Band 6	Band 6
Derryhale	S02570	1122	1136	-14	Band 3	Band 3
Dervock	S01102	968	969	-1	Band 3	Band 3
Donaghey(2)	S01569	51	50	1	Band 1	Band 1
Donaghmore (WWTW)	S02840	1936	1938	-2	Band 3	Band 3
Donemana	S03103	800	813	-13	Band 3	Band 3
Donnybrewer	S03080	5185	5370	-185	Band 4	Band 4
Dougan Place	S02164	36	29	7	Band 1	Band 1
Downpatrick (WWTW)	S00771	17524	19657	-2133	Band 5	Band 5
Draperstown	S01615	3250	3252	-2	Band 4	Band 4
Dromara	S00316	1378	1382	-4	Band 3	Band 3
Dromore (Down)	S02127	7367	7480	-113	Band 4	Band 4

Name of Works	CAR ID	AIR16 Actual PE	AIR17 Actual PE	Difference*	AIR16 Band	AIR17 Band
Drumneechy	S03097	24	20	4	Band 1	Band 1
Dundrod	S00326	191	192	-1	Band 1	Band 1
Dundrum(Down)	**S00297**	**1674**	**2243**	**-569**	**Band 3**	**Band 4**
Dungannon	S02850	94502	79331	15171	Band 6	Band 6
Dungiven	S03101	4758	4773	-15	Band 4	Band 4
Dunmurry	S00346	46243	46042	201	Band 6	Band 6
Edenreagh Rd (39-41)	S04094	15	33	-18	Band 1	Band 1
Enniskillen	**S03218**	**24735**	**26231**	**-1496**	**Band 5**	**Band 6**
Ervey Rd	S03107	15	16	-1	Band 1	Band 1
Fivemiletown (WWTW)	S03113	2115	2145	-30	Band 4	Band 4
Glenstall	S01109	20966	21153	-187	Band 5	Band 5
Gortaclady	S01575	18	44	-26	Band 1	Band 1
Greenisland (WWTW)	S00263	12870	12529	341	Band 5	Band 5
Greysteel (WWTW)	S03123	2182	2187	-5	Band 4	Band 4
Hilltown (WWTW)	S02701	2024	2054	-30	Band 4	Band 4
Holybank Rd(54)	S01775	15	14	1	Band 1	Band 1
Irvinestown	S03137	2674	2679	-5	Band 4	Band 4
Keady (Armagh)	S02553	4588	4568	20	Band 4	Band 4
Kesh (WWTW)	S03140	2681	2684	-3	Band 3	Band 3
Kilkeel (WWTW)	S00313	12750	14101	-1351	Band 5	Band 5
Killeter	S03144	125	144	-19	Band 1	Band 1
Killinchy (WWTW)	S00252	4062	4640	-578	Band 4	Band 4

Name of Works	CAR ID	AIR16 Actual PE	AIR17 Actual PE	Difference*	AIR16 Band	AIR17 Band
Killygonlan (WWTW)	S02043	1293	1303	-10	Band 3	Band 3
Kilrea	S01156	2447	2555	-108	Band 4	Band 4
Kiltubbrid	S02588	33	23	10	Band 1	Band 1
Larne (WWTW)	S02044	23106	23175	-69	Band 5	Band 5
Legatirriff	S02430	23	24	-1	Band 1	Band 1
Limavady (WWTW)	S03162	16373	16321	52	Band 5	Band 5
Limestone(1)	**S03164**	**0**	**3**	**3**	**N/A**	**Band 1**
Lisburn (New Holland)	S00329	69644	69742	-98	Band 6	Band 6
Lisnaskea (WWTW)	S03171	6381	6483	-102	Band 4	Band 4
Maghera (L/Derry)	S01629	6579	6750	-171	Band 4	Band 4
Magherafelt (WWTW)	S01621	16809	17453	-644	Band 5	Band 5
Magheramourne	S01464	85	75	10	Band 1	Band 1
Marlacoo Rd	S02149	28	26	2	Band 1	Band 1
Moneyglass	S01589	145	126	19	Band 1	Band 1
Moneymore (WWTW)	S01589	2821	2828	-7	Band 4	Band 4
Moneyreagh	S00337	2383	2386	-3	Band 4	Band 4
Mossvale Terrace	S02153	36	30	6	Band 1	Band 1
Mountjoy(Dungannon)	S02849	486	487	-1	Band 2	Band 2
Moy (WWTW)	S02859	2964	3179	-215	Band 4	Band 4
Mullyroddan	S02851	21	20	1	Band 1	Band 1

Name of Works	CAR ID	AIR16 Actual PE	AIR17 Actual PE	Difference*	AIR16 Band	AIR17 Band
Newcastle (WWTW)	S00303	16235	16227	8	Band 5	Band 5
NewMills (WWTW)	S02852	724	725	-1	Band 3	Band 3
Newry (WWTW)	S02685	62199	56605	5594	Band 6	Band 6
Newtownbreda (WWTW)	S00342	34490	34497	-7	Band 6	Band 6
Newtownbutler (WWTW)	S03200	1286	1289	-3	Band 3	Band 3
North Coast (WWTWs)	S04150	76714	76036	678	Band 6	Band 6
Omagh (WWTW)	S03999	33667	33245	422	Band 6	Band 6
Portglenone (WwTW)	S01449	3476	3488	-12	Band 3	Band 3
Riverside(16-20)	S02029	12	Pumpaway	12	Band 1	Pumpaway
Rosscor	S03212	15	8	7	Band 1	Band 1
Roughfort	S01470	439	435	4	Band 2	Band 2
Seahill	S00774	6795	6794	1	Band 4	Band 4
Strabane	S03223	21553	22191	-638	Band 5	Band 5
Swatragh (WWTW)	S01637	728	719	9	Band 3	Band 3
Tamlaght (WWTW)	S03224	426	428	-2	Band 2	Band 2
Tandragee	S02174	12715	11686	1029	Band 5	Band 5
The Loup (WWTW)	**S03231**	**239**	**255**	**-16**	**Band 1**	**Band 2**
Tully Rd Headworks	S03975	3226	3227	-1	Band 4	Band 4
Warrenpoint (WWTW)	S02720	14859	14871	-12	Band 5	Band 5

Name of Works	CAR ID	AIR16 Actual PE	AIR17 Actual PE	Difference*	AIR16 Band	AIR17 Band
Whitehouse	S00265	87918	87930	-12	Band 6	Band 6
			Total	19667		

***(-ve indicates AIR17 figure larger)**

The change in PE equates to an increase in load of 1180.02kg BOD/day (i.e. 19667 x 0.06 for 60g/hd/day) from AIR16 to AIR17

Difference between AIR17 and AIR16 for the total load entering WWTWs as shown in Table 17d - column 11, row 7

Total Load Received at WWTWs for AIR16 -	**109567**
Total Load Received at WWTWs for AIR 17 -	**108387**
Total Difference -	**1180**

The differences between the above totals is due to rounding.

The interpretation of the treatment categories is as below:-

AIR17 Treatment Category	**Highest Form of Treatment at WWTWs**	**Treatment Category Abbreviation**
Primary	Primary Settlement Septic Tank	Prim
Secondary Activated Sludge (Whether followed by Final settlement or not)	Oxidation Ditch Extended Aeration Activated Sludge SAF BAF MBR SBR	Sec Act
Secondary Biological (Whether followed by Final settlement or not)	Biological Filter RBC RBC Package Bioclere Package ; Reed Bed (If used as secondary treatment stage)	Sec Bio
Tertiary A1	Secondary Activated Sludge processes whose treatment methods also include prolonged settlement in conventional lagoons or raft lagoons, irrigation over grassland, constructed wetlands, root zone treatment (where used as a tertiary stage), drum filters, microstrainers, slow sand filters, tertiary nitrifying filters, Lockertex screens, gravel clarifiers, wedge wire clarifiers or Clariflow installed in humus tanks, where used as a tertiary treatment stage;	Ter A1

AIR17 Treatment Category	Highest Form of Treatment at WWTWs	Treatment Category Abbreviation
Tertiary A2	Secondary Activated Sludge processes whose methods also include phosphorous reduction, rapid-gravity sand filters, moving bed filters, pressure filters, nutrient control using physico-chemical and biological methods, disinfection, hard COD and colour removal and MBRs where used as a tertiary treatment stage;	Ter A2

AIR17 Treatment Category	Highest Form of Treatment at WWTWs	Treatment Category Abbreviation
Tertiary B1	Secondary Biological processes whose treatment methods also include prolonged settlement in conventional lagoons or raft lagoons, irrigation over grassland, constructed wetlands, root zone treatment (where used as a tertiary stage), drum filters, microstrainers, slow sand filters, tertiary nitrifying filters, Lockertex screens, gravel clarifiers, wedge wire clarifiers or Clariflow installed in humus tanks, where used as a tertiary treatment stage;	Ter B1
Tertiary B2	Secondary Biological processes whose methods also include phosphorous reduction, rapid-gravity sand filters, moving bed filters, pressure filters, nutrient control using physico-chemical and biological methods, disinfection, hard COD and colour removal and MBRs where used as a tertiary treatment stage;	Ter B2
Sea Outfalls	Where a load is discharged to sea having received only Preliminary treatment (including Grit removal and screenings conditioning) or simple screening (Bar Screen) or no screening or no treatment (Includes Retention Tanks)	Sea Out Prel Sea Out Screen Sea Out Unscreen

Changes in Line 8 - Small works with ammonia consent (between 5 and 10) from AIR16 to AIR17.

Name of Works	CAR ID	AIR16 Actual PE	AIR17 Actual PE	PE Change *	Comments
Derryhale	S02570	1122	1136	-14	PE updated with AIR17 Trade Information
Donaghmore (WWTW)	S02840	1936	1938	-2	PE updated with AIR17 Trade Information
Draperstown	S01615	3250	3252	-2	PE updated with AIR17 Trade Information
Enniskillen	S03218	24735	0	24735	PE updated with AIR17 Trade Information. This WwTW is now a Band 6 WWTWs, and is now removed from Line 8.

Name of Works	CAR ID	AIR16 Actual PE	AIR17 Actual PE	PE Change *	Comments
Feeny	S03110	924	924(but for L8, 0 for AIR17)	924	Following a consent change this WwTW has been removed from 5-10 ammonia list and added to <=5 ammonia list
Forkhill	S02270	1746(but for L8 had been 0 for AIR16)	1746	-1746	Following a consent change this WwTW has been added to the 5-10 ammonia list .
Hilltown (WWTW)	S02701	2024	2054	-30	PE updated with AIR17 Trade Information
Kesh (WWTW)	S03140	2681	2684	-3	PE updated with AIR17 Trade Information.
Lisnaskea (WWTW)	S03171	6381	6483	-102	PE updated with AIR17 Trade Information
Maghera (L/Derry)	S01629	6579	6750	-171	PE updated with AIR17 Trade Information
Strabane	S03223	21553	22191	-638	PE updated with AIR17 Trade Information
Swatragh	S01637	728	719	9	PE updated with AIR17 Trade Information
Tamlaght	S05877	426	428	-2	A population study was carried out for this site and reviewed and adopted for AIR17.
			Total	22958	

***(-ve Indicates AIR17 PE Higher)**

The change in PE equates to an increase in load of 1377.42 kg/d (i.e. 22958 x 0.06 for 60g/hd/day) from AIR16 to AIR17, for line 8.

Total Load rec'd by small WWTWs with NH3 consents (5-10mg/l) for AIR16-	**6398.2**
Total Load rec'd by small WWTWs with NH3 consents (5-10mg/l) for AIR17-	**5021**
Total Difference –	**1377.24**

The major decrease in the AIR17 value for Line 8 is as a result of the Band Size changing from a 5 to a 6 for Enniskillen WWTWs.

Changes in Line 9 - Small works with ammonia consent (between 0 and 5) from AIR16 to AIR17.

Name of Works	CAR ID	AIR16 Actual PE	AIR17 Actual PE	PE Change*	Comments
Annahilt	S00317	1751	1750	1	Change due to rounding
Annsborough	S02687	5879	5882	-3	PE updated with AIR17 Trade
Ballyclare	S01467	16466	16352	114	
Ballynahinch (Down)	S00311	7942	7936	6	
Banbridge (WWTW)	S02102	22753	21733	1020	
Coalisland	S02828	10074	10107	-33	
Cookstown (WWTW)	S01582	19771	20014	-243	
Downpatrick (WWTW)	S00771	17524	19657	-2134	
Dromara	S00316	1378	1382	-4	
Dromore (Down)	S02127	7367	7480	-113	
Dungiven	S03101	4758	4773	-15	
Feeny	S03110	924(but for L9, 0 for AIR17)	924	-924	Following a consent change this WwTW has been removed from 5-10 ammonia list and added to <=5 ammonia list
Irvinestown	S03137	2674	2679	-5	PE updated with AIR17 Trade
Keady(Armagh)	S02553	4588	4568	20	
Killinchy (WWTW)	S00252	4062	4640	-578	
Limavady (WWTW)	S03162	16373	16321	52	
Magherafelt (WWTW)	S01621	16809	17453	-644	
Moneymore (WWTW)	S01589	2821	2828	-7	
Moneyreagh	S00337	2383	2386	-3	
Mountjoy(Dungannon)	S02849	486	487	-1	
Newtownbutler (WWTW)	S03200	1286	1289	-3	
Nixons Corner	S03110	285	285(but for L9, 0 for AIR17)	285	Nixon's Corner is removed due to its ammonia consent being removed.

Name of Works	CAR ID	AIR16 Actual PE	AIR17 Actual PE	PE Change*	Comments
Tandragee	S02174	12715	11686	1029	PE updated with AIR17 Trade Information
			Total	-2183	

***(-ve Indicates AIR17 PE Higher)**

The change in PE equates to an increase in load of 130.98 kg/d (i.e. 2183 x 0.06 for 60g/hd/day) from AIR16 to AIR17 for line 9.

Total Load rec'd by small WWTWs with NH3 consents (0-5mg/l) for AIR16-	**14120**
Total Load rec'd by small WWTWs with NH3 consents (0-5mg/l) for AIR17-	**14250.5**
Total Difference -	**131**

PPP

Lines 1-6

The loading on the PPP WwTW has not altered from AIR16 period reporting, even though the Richhill WwTW could be assessed as a Band 3 due to current BOD loading.

Line 9

The loading on the PPP WwTW has altered from AIR16 period reporting, this has caused the BOD loading for Richhill to fall just within Band 3 while previously being classified as Band 4. However, NI Water has retained its previous classification as the asset has not been changed.

Specific required commentary;

- There are no doubts about the classification of any of the PPP works.
- The data is consistent with the data provided on Table 15 Line 8 (PPP Only) table.
- Based on the calculated loads treated at the PPP sewage works in the AIR 17 Reporting period, there are no size band 1 PPP works on which to provide extra detail.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17f SEWERAGE EXPLANATORY FACTORS

SEWAGE TREATMENT WORKS - COSTS (NIW Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										TOTAL
				PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS			
					ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	
A	**SMALL WORKS**													
1	Direct costs of STWs in size band 1	£000	3	52.989	66.460	558 829	0.000	0.000	14.374	20.520	0.000	0.000	7.794	720.965
2	Direct costs of STWs in size band 2	£000	3	0.000	50.856	263 592	38.325	16.261	63.426	77.118	90.983	19.917	0.000	620.479
3	Direct costs of STWs in size band 3	£000	3	17.700	499.713	866 539	153.636	400.774	279.307	165.532	82.779	0.000	12.008	2,477.989
4	Direct costs of STWs in size band 4	£000	3	20.961	738.655	243 903	27.611	1,313.771	45.127	182.914	57.790	4.851	0.000	2,635.583
5	Direct costs of STWs in size band 5	£000	3	0.000	610.871	0.000	269.289	1,623.461	0.000	186.928	5.958	0.000	0.000	2,696.507
B	**LARGE WORKS**													
6	Direct costs of STWs in size band 6	£000	3		1,235.347	0.000	0.000	5,677.738	0.000	0.000	0.000	0.000	0.000	6,913.085
C	**ALL WORKS**													
7	Total direct costs of STWs - all sizes	£000	3	91.651	3,201.903	1,932 863	488.861	9,032 005	402.233	633.013	237.509	24.768	19.802	16,064.608
8	Sludge Treatment and Disposal Adjustments	£000	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	Sewage Treatment: Direct costs	£000	3	91.651	3,201.903	1,932 863	488.861	9,032 005	402.233	633.013	237.509	24.768	19.802	16,064.608
10	Sewage Treatment: Power costs	£000	3	11.808	1,535.221	472.819	248.299	5,276 301	74.496	214.879	45.844	1.325	1.523	7,882.513
11	Sewage Treatment: service charges	£000	3	4.933	92.741	97.376	15.027	195.982	22.422	26.167	10.789	1.936	1.015	468.388
12	Sewage Treatment: General and Support	£000	3	128.510	2,416.039	2,536.781	391.487	5,105.649	584.115	681.700	281.078	50.446	26.449	12,202.252
13	Sewage Treatment: Functional Expenditure	£000	3	220.161	5,617.941	4,469.644	880.347	14,137.654	986.348	1,314.713	518.587	75.214	46.250	28,266.861

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17f SEWERAGE EXPLANATORY FACTORS

SEWAGE TREATMENT WORKS - COSTS (PPP only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										TOTAL
					SECONDARY		TERTIARY				SEA OUTFALLS			
				PRIMARY	ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	
A	SMALL WORKS													
1	Direct costs of STWs in size band 1	£000	3											
2	Direct costs of STWs in size band 2	£000	3											
3	Direct costs of STWs in size band 3	£000	3											
4	Direct costs of STWs in size band 4	£000	3				[redacted]							[redacted]
5	Direct costs of STWs in size band 5	£000	3					[redacted]						[redacted]
B	LARGE WORKS													
6	Direct costs of STWs in size band 6	£000	3					1,653.826						1,653.826
C	ALL WORKS													
7	Total direct costs of STWs - all sizes	£000	3	0.000	0.000	0.000	[redacted]	[redacted]	0.000	0.000	0.000	0.000	0.000	[redacted]
8	Sludge Treatment and Disposal Adjustments	£000	3											0.000
9	Sewage Treatment: Direct costs	£000	3				31.772	1,763.712						1,795.484
10	Sewage Treatment: Power costs	£000	3				31.772	1,763.712						1,795.484
11	Sewage Treatment: service charges	£000	3											0.000
12	Sewage Treatment: General and Support (NIW	£000	3		[redacted]		34.469	137.876						[redacted]
13	Sewage Treatment: Functional Expenditure	£000	3	0.000	[redacted]	0.000	[redacted]	[redacted]	0.000	0.000	0.000	0.000	0.000	[redacted]

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17f SEWERAGE EXPLANATORY FACTORS

SEWAGE TREATMENT WORKS - COSTS (Total)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
				TREATMENT CATEGORY										TOTAL
				PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS			
					ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED	
A	SMALL WORKS													
1	Direct costs of STWs in size band 1	£000	3	52.989	66.460	558.829	0.000	0 000	14.374	20.520	0.000	0.000	7.794	720.965
2	Direct costs of STWs in size band 2	£000	3	0.000	50.856	263.592	38.325	16.261	63.426	77.118	90.983	19.917	0.000	620.479
3	Direct costs of STWs in size band 3	£000	3	17.700	499.713	866.539	153.636	400.774	279.307	165.532	82.779	0.000	12.008	2,477.989
4	Direct costs of STWs in size band 4	£000	3	20.961	738.655	243.903	[redacted]	1,313.771	45.127	182.914	57.790	4.851	0.000	[redacted]
5	Direct costs of STWs in size band 5	£000	3	0.000	610.871	0.000	269.289	[redacted]	0.000	186.928	5.958	0.000	0.000	[redacted]
B	LARGE WORKS													
6	Direct costs of STWs in size band 6	£000	3	0.000	1,235.347	0.000	0.000	7,331.564	0.000	0.000	0.000	0.000	0.000	8,566.911
C	ALL WORKS													
7	Total direct costs of STWs - all sizes	£000	3	91.651	3,201.903	1,932.863	[redacted]		402.233	633.013	237.509	24.768	19.802	[redacted]
8	Sludge Treatment and Disposal Adjustments	£000	3	0.000	0.000	0.000	0.000	0 000	0.000	0.000	0.000	0.000	0.000	0.000
9	Sewage Treatment: Direct costs	£000	3	91.651	3,201.903	1,932.863	520.633	10,795.717	402.233	633.013	237.509	24.768	19.802	17,860.092
10	Sewage Treatment: Power costs	£000	3	11.808	1,535.221	472.819	280.071	7,040.013	74.496	214.879	45.844	1.325	1.523	9,677.997
11	Sewage Treatment: service charges	£000	3	4.933	92.741	97.376	15.027	195.982	22.422	26.167	10.789	1.936	1.015	468.388
12	Sewage Treatment: General and Support	£000	3	128.510	[redacted]	2,536.781	425.956	5,243.525	584.115	681.700	281.078	50.446	26.449	[redacted]
13	Sewage Treatment: Functional Expenditure	£000	3	220.161	[redacted]	4,469.644	[redacted]		986.348	1,314.713	518.587	75.214	46.250	[redacted]

Table 17f - Sewage Treatment Works (NIW only)

An updated Population Equivalent (PE) database with treatment type by WWTW's was sent from Asset Management on the 25 May 2017 which was used to populate Line 1-13. No PPP sites are included in this table. Ballycastle WWTW's falls into Band 5 – Line 5. Ballycastle does not have a separate W finance location however with the further implementation of Cost to Serve the costs can be separately identified. Enniskillen is included in Band 6 for AIR17 however was it was excluded from Band 6 in AIR16.

Table 17f has been completed based on the figures available at for the year ended 31 March 2017 for sewage treatment – Activity 510 less M & E expenditure which is treated as general & support.

Line 1-4 – Size band 1-4

Each WWTW's was assigned a finance location code, W or X. W codes are for a specific works and X codes include the costs of a number of small works. Nearly 90% of the costs can be directly allocated to WWTW's through the further implementation of Cost to Serve and the remaining direct costs are apportioned across the appropriate WWTW's based on PE or direct labour.

Direct Costs include power 521x, contractors 531x, other contractors 532x, materials 541x, chemicals 548x, cost reallocations 611x (this includes direct labours costs and & overhead charges) and service charges.

Through the cost to serve project all power costs are allocated to individual sites and a report was taken from EAM to get the full year power cost per WWTW's. There is one electric meter at each site and all the power costs are coded to each individual works to sewage treatment. The Field Managers responsible for each WWTW's estimated the percentage use for sludge treatment and sewage treatment at each WWTW's. This was multiplied by the Power costs at the site to calculate the portion relating to sewage treatment.

The type of treatment at each WWTW's was provided by Asset Management and this was used to assign costs to Column 1-10.

In total the costs have decreased in Lines 1-4 from AIR16 by circa £0.4M.

Line 5 – Size band 5

Direct costs for sewage treatment, at each location in Size Band 5, were recorded and matched to the appropriate type of treatment. Enniskillen was included in Size Band 5 in AIR16, this WWTW's is included in Band 6 in AIR17.

The costs against this line have decreased by circa £0.5M mainly due to the reduced power costs and the reallocation of Enniskillen.

Line 6 – Size band 6

This line agrees with Line 9 in Table 17b. No PPP sites have been included.

Direct costs are in line with costs from AIR16. This is mainly due to the extra works included in Band 6 being offset by a decrease in Power costs.

Line 7 – Total Direct Costs

This is a calculated line and it's the total of Line 1-6. This figure agrees with Table 22, Column 2 Line 9.

The total direct costs have decreased since AIR16 by circa £0.9M. This is primarily due to a decrease in power rate as mentioned earlier, and also due to the extended period of dry weather that was experienced in 2016/17 which resulted in a decrease in running costs.

Line 8 – Sludge Treatment & Disposal Adjustment

These costs are not included in the total of Line 7 therefore this line is zero.

Line 9 – Direct Costs

This line is equal to Line 7 and is the total direct costs for each type of treatment. This figure agrees with Table 22, Column 2 Line 9.

Line 10 – Power Costs

Through the cost to serve project all power costs are allocated to individual sites and a report was provided by the Energy Finance Business Partner for the full year power cost per WWTW's. This figure agrees with Table 22, Column 2 Line 2.

Line 11 – Service Charges

£0.47M of environmental regulatory charges are included in Sewage, in line with AIR16.

Line 12 – General & Support

The Total General & Support expenditure was taken directly from Table 22 (NIW only) Line 10 Column 2 (see Table 22 commentary) and apportioned across the locations based on direct costs.

This figure has increased by £2.1M from AIR16. Overall General and Support costs have increased in AIR17 and the apportionment of costs to Sewage Treatment has increased. See commentary on Table 22 for further breakdown and explanation.

Line 13 – Functional Expenditure

This is a calculated line and is the total of Line 9 and Line 12. The total agrees to Table 22 (NIW Only) Column 2 Line 11. The total costs have increased in AIR17 by circa £1.1M for all the reasons mentioned under the lines above. Refer to Table 22 commentary for further explanation.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17g SEWERAGE EXPLANATORY FACTORS
SLUDGE TREATMENT AND DISPOSAL INFORMATION (NIW Only)

	DESCRIPTION	UNITS	DP	1 FARMLAND UNTREATED	CG	2 FARMLAND CONVENTIONAL	CG	3 FARMLAND ADVANCED	CG	4 INCINERATION	CG	5 TO PPP	CG	6 LANDFILL	CG	7 COMPOSTED	CG	8 LAND RECLAMATION	CG	9 OTHER	CG	10 TOTAL	CG
1	Resident population served	000	1									1473 2	C3	32.4	C3							1,505.6	C3
2	Amount of sewage sludge	ttds	1									36.4	A2	0.8	B2							37.2	B2
3	Sludge treatment: direct costs	£000	3									0.000		0.000						1,859 637		1,859.637	
4	Sludge disposal: direct costs	£000	3									2,121.888		0.000						0 000		2,121.888	
5	Sludge treatment & disposal: direct costs	£000	3									2,121.888		0.000						1,859 637		3,981.525	
6	Sludge treatment & disposal: power costs	£000	3									0.000		0.000						1,087 594		1,087.594	
7	Sludge treatment & disposal: service charges	£000	3									0.000		0.000						188 924		188 924	
8	Sludge treatment & disposal: general & support exp.	£000	3									1,652.807		0.000						46 941		1,699.748	
9	Sludge treatment & disposal: functional expenditure	£000	3									3,774.695		0.000						1,906 578		5,681.273	

Table 17g - Sewerage explanatory factors - sludge treatment and disposal information

NIW only

Line 1 - Resident population served

The resident population served is that reported in T17a:L1 as required in the Utility Regulator's guidance documentation.

Lines 1.5 & 1.6 have been estimated using a pro-rata value based on the total sewage sludge disposal data from SLS and the WW Sludge Management monthly report. The pro-rata population figures have been assigned CGs of C3 accordingly based on the C3 CG of the base population data.

Line 2 – Amount of sewage sludge

This is the total sewage sludge produced (NIW Only) for 2016/17 (tds) as recorded by PPP and monthly by Ww Area Sludge Officers (reconciled using the SLS) and presented in the monthly Sludge Management Report along with an estimated quantity of WwTW & WwPS grit & screenings removed as part of the treatment process and disposed of under Tender C821.

Line 2.5 has been based on the total sewage sludge disposal (NIW Only) data from SLS and the WW Sludge Management monthly report.

Line 2.6 is an estimated quantity of WwTW's & WwPS`s grit & screenings removed as part of the treatment process and disposed of under Tender C821.
The methodology has not changed from AIR16. All Sludge is transported and disposed of at the Incinerator or another PPP site.

The costs in Table 17g are populated with the information available for the year ended 31 March 2017.

Line 3 – Sludge Treatment: Direct Costs

Expenditure has been input in Column 9.

The costs for Sludge Treatment are in line with AIR16.

Sludge treatment costs for WWTW's are coded using activity 621 and can be separately identified to populate Column 9.

Power costs in AIR16 do not include the Incinerator or any PPP sites.

Line 4 - Sludge Disposal: Direct Costs

Columns 5 and 6 have been populated on this line. The direct costs are in line with AIR16.

Line 5 - Sludge Treatment & Disposal: Direct Costs

This is a calculated line and is the total of line 3 and line 4. The figure agrees with Table 22 (NIW only) column 3 line 9. Costs have decreased by circa £0.3M from AIR16. This is due to small movements across the cost categories as detailed below.

Line 6 – Sludge Treatment & Disposal: Power Costs

Power costs associated with Sludge Treatment are used to populate Column 9. Power costs have been allocated to every site through cost to serve. There is only one electric metre at each WWTW's so an estimate was received for each WWTW's from the wastewater field mangers so that a split could be calculated at each works between sludge and sewage treatment at the sites where both activities occur. The power team supplied a split between the Incinerators and Belfast WWTW's which was used apportion a cost to the works. The split for this in AIR16 was 44:56 and in AIR17 is 46:54 for the Belfast and Incinerators (based on an estimated KWhr usage and a number of sub-meters). No costs for the Incinerator have been included in this table in AIR17.

Line 7 - Sludge treatment & disposal: Service Charges

The Service Charges figure is approx. £0.2m in AIR17 and this is similar to what the costs were in AIR16. PPC (Pollution Prevention Control) Permits are included as Sludge Treatment and therefore included in Column 9. The Service Charges figure agrees to Table 22, Line 7 Column 3.

Line 8 - Sludge treatment & disposal: General & Support

This figure was taken directly from Table 22 (NIW only) Column 3 Line 10 and apportioned across the columns in Table 17g based on direct labour costs. This is following the same methodology as AIR16. Overall General and Support costs have increased from AIR16. See Table 22 commentary. A detailed breakdown of general & support is included in the commentary for Table 21 & 22.

Line 9 – Sludge treatment & disposal: Functional Expenditure

This is a calculated line and is the total of Line 5 and Line 8. Total costs have decreased by approximately £0.1M due to the reasons given above.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 18 REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)

PROFIT AND LOSS ACCOUNT FOR YEAR ENDING 31 MARCH

				1	2	3	4	5	6	7	8	9
	DESCRIPTION	**UNITS**	**DP**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**
1	Turnover	£m	3	366.398	361.313	364.407	367.287	372.851				
2	Operating costs (excluding HCD)	£m	3	-202.316	-209.933	-205.450	-207.727	-210.758				
3	Historical cost depreciation	£m	3	-44.871	-48.580	-47.523	-54.364	-55.773				
4	Operating income	£m	3	0.334	0.276	0.525	0.799	0.656				
5	Operating profit	£m	3	119.545	103.076	111.959	105.995	106.976				
6	Other income	£m	3	0.000	0.000	0.000	0.000	0 000				
7	Net interest receivable less payable	£m	3	-55.067	-48.580	-51.957	-53.609	-53.804				
8	Profit on ordinary activities before taxation	£m	3	64.478	54.496	60.002	52.386	53.172				
9	Current tax	£m	3	0.000	0.000	-0.017	-0.017	-0 012				
10	Deferred tax	£m	3	-24.872	13.798	-24.037	2.536	-6.430				
11	Profit on ordinary activities after taxation	£m	3	39.606	68.294	35.948	54.905	46.730				
12	Extraordinary items	£m	3	0.000	0.000	0.000	0.000	0 000				
13	Profit for the year	£m	3	39.606	68.294	35.948	54.905	46.730				
14	Dividends	£m	3	-26.587	-21.391	-21.562	-22.888	-21.510				
15	Retained profit for the year	£m	3	13.019	46.903	14.386	32.017	25 220				

Table 18 – HC Profit and Loss account for the year ending 31 March 2017

- Results of unappointed activities are shown separately in the published regulatory accounts.
- There are no exceptional charges or income.
- Accounting treatments under Historical Cost and Current Cost are the same.
- There are no minority interests.
- PPP charges for 2016/17 can be analysed as follows:

	Gross Charge	Residual interest credit	Lease repayment	Capital maintenance	HC Depreciation	Net P&L Charge
	£m	£m	£m	£m	£m	£m
Alpha*	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Omega	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Kinnegar	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

* includes lease interest of [redacted] – shown in line 7 of Table 18.

- PPP elements of line 2 'Operating Costs' are [redacted]
  Additionally within Line 3 'HCD' there are depreciation costs for the Alpha Project of [redacted]

The Current and Deferred tax charge

Factors affecting the tax charge for the current period

The company adopted International Financial Reporting Standards (IFRS) for the first time in its statutory accounts for the year-end 31st March 2011. The regulatory accounts will continue to be produced under 'Old'* UK generally accepted accounting policies (UK GAAP). However, as the corporation tax computation for the company will be based on the IFRS statutory accounts it has been agreed with the Regulator that the tax charge and provision in the regulatory accounts should be the same as those shown in the statutory accounts.

*'Old' UKGAAP - this is UK GAAP in existence prior to the introduction of FRS100, FRS101 and FRS102

The income tax expense in the statutory accounts for the period is £6.600m, which is lower than the charge based on the standard rate of corporation tax in the UK (20%). The differences are explained below:

Reconciliation of effective tax rate	**£m**
Profit for the year	96.312
Income tax expense	6.600
Profit before income tax	102.912
Income tax using the Company's domestic tax rate (21%)	20.582
Reduction in tax rate	(13.908)
Non-deductible expenses	0.133
Other timing differences	(0.200)
Adjustment to prior years	(0.007)
	6.600

The statutory accounts income tax expense of £6.600m can be shown as follows:

Tax recognised in profit and loss

	£m
Current tax expense	
Current year	(0.186)
Adjustment for prior years	0. 017
	(0.169)
Deferred Tax	
(Origination)/ reversal of timing differences	**(20.404)**
Adjustment to prior years	**(0.010)**
Reduction in tax rate (18% to 17%)	**13.983**
	(6.431)
Tax charge on profit on ordinary activities	**(6.600)**

This statutory income tax expense of £6.600m under IFRS is shown in the Regulatory Accounts as follow:

	Appointed activities	**Unappointed activities**	**Total**
	£m	**£m**	**£m**
Current tax	0.012	0.157	0.169
Deferred tax	6.431	-	6.431
Total	**6.443**	**0.157**	**6.600**

The statutory accounts deferred tax expense of £6.431m is wholly allocated to appointed activities since the temporary tax timing differences associated with the deferred tax charge reside only in the appointed part of the business.

The statutory current tax charge of £0.169m relates to three specific income streams - interest receivable (wholly appointed - see Commentary to Table 18d), aerial site income (unappointed activity) and rental income (unappointed activity). The current tax charge has been allocated as follows:

Income stream	**Income £m**	**Current tax charge £m**	**Appointed £m**	**Unappointed £m**
Interest Receivable	0.070	0.012	0.012	-
Aerial sites	0.861	0.098	-	0.098
Rental Income	0.346	0.059	-	0.059
Total	**1.277**	**0.169**	**0.012 Table 18 Line 9**	**0.157**

The statutory deferred tax liability at 31st March 2016 is £191.046m. Table 19 shows a deferred tax liability on the appointed balance sheet of £202.263m (with zero balance at 31st March 2017 for unappointed activities). This liability under UKGAAP reconciles to the IFRS based statutory accounts balance at 31st March 2017 of £191.046m, as the IFRS Accounts are required to show the deferred tax asset of £11.217m associated with the pension liability within the deferred tax balance rather than the UKGAAP approach of

showing this amount separately within the pension account. The statutory balance of £191.046m can be summarised as follows:

	2017 £m Excluding Pension	2017 £m Pension	**2017 £m Total**
Opening liability	195.465	(1.291)	**194.174**
Current year deferred tax charge/(credit) to profit and loss account	6.805	(0.368)	**6.437**
Prior year deferred tax (credit)/charge to P&L	(0.007)	-	**(0.007)**
Current year deferred year tax charge to the Statement of Total Recognised Gains and Losses	0.000	(9.558)	**(9.558)**
Closing liability	202.263	(11.217)	**191.046**

The UKGAAP approach (FRS 17) aspect of deferred tax is shown separately in the Regulatory Accounts and rolled up into the balance shown within the pension asset on the balance sheet as follows:

	2016 £m
Benefit obligation at end of year	(305.678)
Fair value of plan assets at end of year	239.694
Net liability	(65.984)
Less deferred tax	11.217
Pension liability after deferred tax	**(54.767)**

The actuarial assumptions underpinning the valuation of the NIW defined benefit scheme assets and liabilities can be shown as follows:

Weighted average assumptions used to determine benefit obligations at:	**31-Mar-17**	**31-Mar-16**
Discount rate	2.60%	3.70%
Rate of compensation increase	2.10% for the next 4 years, 3.10% thereafter	1.95% for the next 4 years, 2.95% thereafter
Rate of increase in pensions in payment	3.10%	2.95%
Rate of increase in pensions in deferment	3.10%	2.95%
Inflation RPI	3.10%	2.95%
Inflation CPI	2.10%	1.95%

Weighted average assumptions used to determine net pension cost for year ended:	**31-Mar-17**	**31-Mar-16**
Discount rate	3.70%	3.40%
Rate of compensation increase	1.95% for 4 yrs 2.95% thereafter	2% for 5 yrs 3% thereafter
Rate of increase in pensions in payment	2.95%	3.00%
Inflation	2.95%	3.00%

Any changes to the assumptions from 2016 to 2017 have been advised by the independent actuaries.

There is a pension liability at 31 March 2017 of £54.767 (after deferred tax). In agreement with the Pension Trustees, the cash contribution rate to the Fund is 24.6% of pensionable pay thereafter (2015/16: 24.6%).

A dividend of £23.262m was proposed, approved and paid in 2016/17 and thus there is a dividend in Table 18 for the current year.

The approach to dividends is to allocate an amount of dividend to unappointed activities in the year that will reduce the ongoing build up of cash balances within the unappointed balance sheet. This is achieved by allocating dividend to unappointed activities to achieve nil profit on these activities.

In the year ended 31st March 2017, £21.510 m of the statutory dividend of £23.262m was allocated to appointed activities and £1.752m allocated to unappointed activities.

Operating Costs

The following table shows a reconciliation between the operating costs as reported in the regulatory historic cost accounts (Table 18 line 2) and regulatory current cost accounts (Table 20 line 2).

Operating Costs	**£m**
Table 18 Line 2	**(210.758)**
Add back HC amortisation of grants and contributions	(1.001)
Less CC amortisation of grants and contributions	4.144
Add CC depreciation	(110.854)
Table 20 line 2	**(318.469)**

Cost components in Operating Costs

The following cost components of Line 2 (£210.758m) exceed £5m in 2016-17:

Employment Costs	21.405m*^
Power	26.872m*
Rates	25.861m*
Contractors	17.036m*

Customer services	8.848m
Materials and consumables	5.249m
General and support expenditure	40.895m
PPP Operating Charges –Alpha	[redacted]
PPP Operating Charges –Omega	
IRC	25.008m
Total	[redacted] **([redacted] of total operating costs)**

* includes an amount relating to unappointed activities that cannot be extracted out for the summary above.
^ stated before an amount is capitalised (see later in commentary).
^^ stated net of residual interest credit.

Interest

Interest received and payable can be summarised as follows:

	£m	£m
Interest received		
Bank Interest	0.070	
Total Interest received		**0.070**
Interest Payable:		
On bonds held as security	(0.026)	
On all other loans	(47.086)	
On PPP finance lease	[redacted]	
On Pension Fund	(0.200)	
Total Interest Payable		[redacted]
Net Interest		

Capitalisation of costs

During 2016/17, £12.510m of costs were capitalised from the profit and loss account. This can be broken down as follows:

Cost	**£m**
Staff Costs	10.344
Labour charge	0.177
Temporary staff	0.233
Consultants	-0.007
Overheads capitalised	1.763
Total	**12.510**

The majority of costs capitalised relate to staff costs and overheads. These costs relate to the NIW staff who spend their time on capital projects e.g. Engineering Procurement or Asset Management staff. These costs will add to the value of the completed asset.

Comparison to prior year and PC15

A comparison to 2015/16 and to PC15 can be shown as follows:

	Actual	**Actual**	**PC15**
	2016 -2017	**2015 -2016**	**2016 -2017**
	£m	**£m**	**£m**
Sales	372.851	367.287	377.400
Expenditure	(265.875)	(261.292)	(273.900)

Net Operating Profit	106.976	105.995	103.600
Operating Margin	*28.7%*	*28.9%*	*27.5%*
Interest payable	(53.804)	(53.609)	(58.600)
Tax charge	(6.442)	2.519	(7.900)
Profit for the year	46.730	54.905	37.000
Net Profit Margin	*12.5%*	*14.9%*	*9.8%*

Explanation of variances on sales, operating profit and interest payable are outlined in the commentary to Table 20.

Systems and controls

The company uses the Oracle financial system to produce monthly and annual accounting information. The Oracle General Ledger produces a trial balance and the detailed accounts are summarised to produce the year-end statutory accounts. A series of spreadsheets are then used to analyse appointed and non-appointed sales and costs to produce the financial information for the Regulatory Accounts and AIR Tables.

The company is progressing a major project to develop a costing system. In terms of regulatory reporting the main tables requiring costing information are Tables 21 and 22 and the commentaries for these tables detail how an interim costing solution is being used to populate these tables until the new costing system is in place.

This new costing solution is also intended to provide better information for the allocation of costs to non-appointed activities (which is currently based on a set of high level costing assumptions).

Internal Controls

The company continues to place great emphasis on internal financial controls throughout the organisation.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 18c REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
STATEMENT OF TOTAL RECOGNISED GAINS AND LOSSES

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
A	CAPITAL EXPENDITURE CATEGORIES											
1	Profit for the year	£m	3	13.019	46.903	14.386	32.017	25.220				
2	Actuarial gains/losses on post employment plans	£m	3	-11.535	8 012	-11.081	4.294	-46.621				
3	Other gains and losses	£m	3	0.000	0 000	0.000	0.000	0.000				
4	Total recognised gains and losses for the year	£m	3	1.484	54.915	3.305	36.311	-21.401				

Table 18c – STRGL (HCA)

Line 2 shows £46.621m of actuarial losses on post-employment plans.

Line 3 is nil as there are no other recognised gains or losses for the year.

Although the Regulatory Accounts are based on 'old' UKGAAP (see commentary to Table 18), the actuarial loss noted above of £46.621m is taken from the IFRS statutory accounts. Similar to last year the application of the amended version of IAS 19 (Employee Benefits) has led to the UKGAAP and IFRS approaches on accounting for pension costs being different. The IFRS approach was used in the Regulatory Accounts for the following reasons:

- The primary difference in IFRS and 'old' UKGAAP in this area arises in the allocation of pension costs as an expense to the profit and loss account or directly to reserves. If the actuarial loss had been calculated in line with 'old' UKGAAP rather than IFRS the actuarial gain charged directly to reserves (through the STRGL) there would have been no overall balance sheet impact on either the profit and loss account reserves or on the pension asset of following IFRS as opposed to 'old' UKGAAP.
- Adopting this approach avoided the additional costs of requesting the company actuary to provide year-end pension disclosures for both statutory accounts and regulatory accounts purposes.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 18d REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
ANALYSIS OF DIVIDENDS AND INTEREST CHARGES FOR YEAR

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
A	**DIVIDEND ANALYSIS**											
1	Dividends in respect of a financial re-organisation	£m	3	0.000	0 000	0.000	0 000	0.000				
2	Other ordinary dividends	£m	3	-26.587	-21 391	-21.562	-22 888	-21.510				
3	Total dividends	£m	3	-26.587	-21 391	-21.562	-22 888	-21.510				
B	**INTEREST ANALYSIS**											
4	Interest receivable/payable on intercompany balances	£m	3	0.000	0 000	0.000	0 000	0.000				
5	Interest receivable/payable in respect of a financial re-organisation	£m	3	0.000	0 000	0.000	0 000	0.000				
6	Indexation element of index-linked bonds	£m	3	0.000	0 000	0.000	0 000	0.000				
7	Preference share dividends	£m	3	0.000	0 000	0.000	0 000	0.000				
8	Other interest receivable	£m	3	0.134	0.112	0.079	0 096	0.070				
9	Other interest payable	£m	3	-44.137	-41.459	-45.367	-46 604	-47.111				
10	Other finance charges - post employment costs	£m	3	0.849	-0 300	0.155	-0.400	-0.200				
11	Other finance charges	£m	3	-11.913	-6 933	-6.824	-6.701	-6.562				
12	Total net interest	£m	3	-55.067	-48 580	-51.957	-53 609	-53.803				

Table 18d – Analysis of dividends and interest charges

There has been no financial reorganisation during the year.

A dividend was proposed and approved in 2016/17 and this is shown on line 2. The full dividend for 2016/17 was £23.262m with £21.510m apportioned to appointed activities and £1.752m apportioned to unappointed activities.

See commentary to Table 18 in relation to the approach to the apportionment of dividend to appointed and unappointed activities.

Interest receivable (£0.070m) relates to monies held on deposit.

Interest payable of £47.111m is comprised of £47.086m relating to the loan notes held with DfI and £0.025m relating to interest payable on cash bonds. The interest on loan notes has increased from last year by £0.549m (1.2%). The increase on in the prior year, is due to the additional interest on the drawdown of £30m additional loan notes in 2016/17 (Generally the interest payable on loan notes will rise year on year as the outstanding liability steadily rises. This occurs as new loans are taken out to cover in year capital expenditure whilst at the same time the loans are not repayable until 2027/2034).

Other finance charges – post employment plans is a cost of £0.200m for the finance interest cost relating to post employment plans calculated by the actuaries of the pension fund at year end.

During 2016/17, an amount of [redacted] has been included as other finance charges. This relates to the imputed interest on the [redacted]

The following table compares the actual net interest payable and balance of loan notes with the 2016/17 budget and PC15:

	Actual	**Budget**	**PC15**
	£m	**£m**	**£m**
Net Interest payable	53.803	47.400	58.600
Loan notes	1,013.560	1,028.600	1,095.000

The drawdown of loans is £81.44m less than the PC15 projected for 2016/17. This is primarily driven by a lower working capital requirement than was anticipated particularly for capital creditors.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 19 REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
BALANCE SHEET AS AT 31 MARCH (TOTAL)

				1	2	3	4	5	6	7	8	9
	DESCRIPTION	UNITS	DP	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
A	FIXED ASSETS											
1	Tangible fixed assets	£m	3	1907 525	1994.848	2073.392	2139.613	2201.787				
2	Investment - loan to group company	£m	3	0.000	0.000	0.000	0.000	0 000				
3	Investment - other	£m	3	0.106	0.091	0.091	0.091	0 091				
4	Total fixed assets	£m	3	1907 631	1994.939	2073.483	2139.704	2201 878				
B	CURRENT ASSETS											
5	Stocks	£m	3	2.379	2.021	2.269	2.368	2 347				
6	Debtors	£m	3	28 824	27.167	30.759	29.832	30 386				
7	Cash	£m	3	9.102	1.637	0.792	2.015	0.412				
8	Short term deposits	£m	3	5.300	0.600	0.020	1.000	2 501				
9	Infrastructure renewals prepayment	£m	3	3.341	0.050	0.000	0.000	0 000				
10	Total current assets	£m	3	48 946	31.475	33.840	35.215	35 646				
C	CREDITORS AMOUNTS FALLING DUE WITHIN ONE YEAR											
11	Overdrafts	£m	3	0.000	0.000	0.000	0.000	0 000				
12	Infrastructure renewals accrual	£m	3	0.000	0.000	-0.702	-5.844	-0 921				
13	Creditors	£m	3	-118 022	-124.404	-132.752	-131.139	-136 204				
14	Borrowings	£m	3	0.000	0.000	0.000	0.000	0 000				
15	Corporation tax payable	£m	3	0.000	0.000	0.000	-0.189	-0.189				
16	Ordinary share dividends payable	£m	3	0.000	0.000	0.000	0.000	0 000				
17	Preference share dividends payable	£m	3	0.000	0.000	0.000	0.000	0 000				
18	Total creditors	£m	3	-118 022	-124.404	-133.454	-137.172	-137 314				
19	Net current assets	£m	3	-69.076	-92.929	-99.614	-101.957	-101 668				
D	CREDITORS AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR											
20	Borrowings	£m	3	-882 560	-911.560	-947.560	-983.560	-1013 560				
21	Other creditors	£m	3	-96.187	-95.302	-93.773	-91.751	-89 305				
22	Total creditors	£m	3	-978.747	-1,006.862	-1,041.333	-1,075.311	-1,102 865				
E	PROVISION FOR LIABILITIES AND CHARGES											
23	Deferred tax provision	£m	3	-187.416	-173.693	-197.982	-195.465	-202 263				
24	Deferred income - grants and contributions	£m	3	-19.456	-19.785	-21.969	-22.301	-23 070				
25	Post employment asset / (liabilities)	£m	3	-4.123	2.784	-9.304	-5.880	-54.767				
26	Other provisions	£m	3	-9.589	-10.315	-5.837	-5.035	-4 886				
F	PREFERENCE SHARE CAPITAL											
27	Preference share capital	£m	3	0.000	0.000	0.000	0.000	0 000				
28	Net assets employed	£m	3	639 224	694.139	697.444	733.755	712 359				
G	CAPITAL AND RESERVES											
29	Called up share capital	£m	3	500 000	500.000	500.000	500.000	500 000				
30	Share premium	£m	3	0.000	0.000	0.000	0.000	0 000				
31	Profit and loss account	£m	3	-32.466	22.449	25.754	62.065	40 669				
32	Other reserves	£m	3	171 690	171.690	171.690	171.690	171 690				
33	Capital and reserves	£m	3	639 224	694.139	697.444	733.755	712 359				

Table 19 – HC Balance Sheet as at 31 March 2017

The balance sheet in the published regulatory accounts includes a separate analysis of unappointed activities.

There are no Group companies.

The retained profit for the year is £25.220m (post dividend).

The P&L reserves in the Balance Sheet decreased by £21.401m and this movement can be shown as follows:

Retained profit for the year	£25.220m
Pension scheme actuarial gain net of deferred tax	(£46.621m)
Movement in P&L Account	**(£21.401m)**

The company has adopted International Financial Reporting Standards (IFRS) in its statutory accounts for the year-end 31st March 2017. The regulatory accounts will continue to be produced under 'Old'* UK generally accepted accounting policies (UK GAAP). As the corporation tax, computation for the company will be based on the IFRS statutory accounts it has been agreed with the Regulator that the tax charge and provision in the regulatory accounts should be the same as those shown in the statutory accounts.

*'Old' UKGAAP - this is UK GAAP in existence prior to the introduction of FRS100, FRS101 and FRS102

No minority interests exist.

The elements of PPP included in the table are as follows:

Line 1 - Tangible Fixed Assets

	Alpha	Omega	Kinnegar	Total
	£m	£m	£m	**£m**
Gross	[redacted]	[redacted]	[redacted]	[redacted]
Acc. Deprec	[redacted]	[redacted]	[redacted]	[redacted]
NBV	[redacted]	[redacted]	[redacted]	[redacted]

[redacted] the NIW assets transferred to and utilised by the concessionaire and subsequent additions of capital maintenance.

Line - 13 Creditors falling due within one year

	Alpha	Omega	Kinnegar	Other PPP expense	Total
	£m	£m	£m	£m	£m
Lease obligation due < 1 yr	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Accruals	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Line 21 - Other creditors falling due after more than one year

	Alpha
	£m
Lease obligation due > 1 yr	[redacted]

Line 26 - Other provisions

	Omega
	£m
Provisions	[redacted]

Significant features and movements

Fixed Assets

Increase of £62m in line with in year additions of £187m, capital contributions of £42m, HC depreciation of £80m, disposals of £0.440m and a movement from an infrastructure accrual of £5.844m to an infrastructure accrual of £0.921m.

Debtors

Increased by £0.554m from £29.832m to £30.386m (1.9%). This is primarily due to:

- Measured, unmeasured and TE debtors decreased by £0.4m
- Measured, unmeasured and TE bad debt provision decreased by £0.1m
- Accrued income from measured and TE customers decreased by £0.7m.
- VAT receivable debtors decreased by £0.4m.
- Dfl Subsidy debtor increased by £0.1m
- Other Prepayments increased by £0.1m
- PPP Capital maintenance increased by [redacted]

Cash and Short term deposits

Cash has decreased by £1.603m from £2.015m to £0.412m (80.0%) and Short-term deposits have increased by £1.501m from £1.000m to £2.501m (150.1%).

The cashflow statement in Table 28 illustrates the uses of these cash and deposit monies in contributing to meeting the non-opex expenditure needs for the year. This can be summarised as follows:

Non-opex expenditure	
Capex	£136m
Net Interest paid	£ 53m
Dividend paid	£ 22m
PPP Lease payments	£ [redacted]
Decrease in cash	(£ 2m)
Increase in deposit monies	£ 2m
Total	[redacted]

Funded by:	
Generated from operations	£183m
Loans	£ 30m
Total	[redacted]

Deferred tax

The deferred tax balance has increased from £195.465m to £202.263m. An explanation for this has been included in the commentary to Table 18.

Borrowings > 1 year

Borrowings have increased by £30m from £983.560m to £1,013.560m. The additions to capital expenditure during the year were £187.0m. The increase in borrowings were used to partly fund these additions to capital expenditure with the balance of capital being financed through capital contributions and working capital.

Post-employment asset/ (liabilities)

The Pension liability of £5.880m increased to a Pension liability of £54.767m (a change in value of 831.4%).

This can be shown as follows:

	£m
Opening balance at 1.4.16	**(5.880)**
Current Service Costs	(9.704)
Administration Costs	(1.352)
Past Service Costs	(1.217)
Contributions	9.865
Finance Cost	(0.226)
Actuarial Gain	(56.179)
Increase in Deferred tax asset on liability	9.926
Closing balance 31.3.17	**(54.767)**

Other provisions

Decreased from £5.035m to £4.886m (2.96%).

This decrease of £0.149m can be summarised as follows:

	£m
Decrease in holiday pay provision	(0.173)
Increase in PL/EL	0.024
Total	**(0.149)**

PPP – Infrastructure renewals charge (IRC) and expenditure (IRE)
– Capital Maintenance

The table below summarises the IRC, IRE and capital maintenance during 2016/17 in relation to the PPP projects:

	Alpha	**Omega**	**Kinnegar**	**Total**
	£m	£m	£m	**£m**
IRE	-	-	-	**-**
IRC	-	-	-	**-**
Capital maintenance	[redacted]	[redacted]	[redacted]	[redacted]

Alpha

Alpha is treated as ‘on balance sheet’ and an amount of the unitary charge for Alpha is deemed to be related to the carrying out of capital maintenance by the operator. For 2016-17, this is confirmed by the operator to be [redacted]. This amount is credited to the Profit and Loss account and debited to Alpha fixed assets.

This capital maintenance is assumed 100% non-infrastructure and there are no infrastructure additions to Alpha in 2016-17 (2015-16: nil). There has therefore been no apportionment of IRC in 2016-17 (2015-16: nil).

Omega and Kinnegar

Both Omega and Kinnegar are treated as ‘off balance sheet’ and the additions in year relate to the residual interest asset with no related IRE, IRC or capital maintenance aspects.

NOR HERN IRELAND WA ER LIMI ED ANNUAL INFORMA ION RE URN

ANNUAL INFORMA ION RE URN ABLE 19a ANALYSIS OF BORROWINGS DUE AF ER MORE HAN ONE YEAR (HIS ORICAL COS ACCOUN ING)
BALANCE SHEE AS A 31 MARCH

	1	2	3		5	6	7	8	9
	DESCRIP ON	MA URI Y years 0dp	PRINCIPAL SUM £m 3dp	x principle sum £m 3dp	REAL COUPON % 2dp	IN ERES RA E % 2dp	EQUIVALEN £m 3dp	EQUIVALEN £m 3dp	VALUE £m 3dp
A	BORROW NGS IN HEDGING RELA IONSHIPS								
A1	Fixed rate instruments								
1									
~									
50									
A2	Floating rate instruments								
51									
100									
A3	Index linked instruments								
101									
150									
	O AL FOR HEDGING INS RUMEN S								
B	BORROW NGS DESIGNA ED A FAIR VALUE HROUGH PROFI AND LOSS								
B1	Fixed rate instruments								
151									
200									
B2	Floating rate instruments								
201									
250									
B3	Index linked instruments								
251									
300									
	O AL FOR BORROWINGS DESIGNA ED A FAIR VALUE HROUGH PROFI AND LOSS								
C	O HER BORROWINGS								
C1	Fixed rate instruments								
301	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	20.000	200.000	1.93%	5.03%	1.006	1.006	20.000
302	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	20.000	200.000	1.79%	.89%	0.978	0.978	20.000
303	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	20.000	200.000	1.38%	.8%	0.896	0.896	20.000
30	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	10.000	100.000	2.03%	5.13%	0.513	0.513	10.000
305	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	10.000	100.000	2.06%	5.16%	0.516	0.516	10.000
306	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	10.000	100.000	2.17%	5.27%	0.527	0.527	10.000
307	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	20.000	200.000	1.95%	5.05%	1.010	1.010	20.000
308	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	5.000	50.000	1.70%	.80%	0.2 0	0.2 0	5.000
309	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	15.000	150.000	1.29%	.39%	0.659	0.659	15.000
310	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	7.000	70.000	0. 0%	3.50%	0.2 5	0.2 5	7.000
311	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	10.000	100.000	0.27%	3.37%	0.337	0.337	10.000
312	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	15.000	150.000	0.52%	3.62%	0.5 3	0.5 3	15.000
313	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	18.000	180.000	0.58%	3.68%	0.662	0.662	18.000
31	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	8.000	80.000	0.5 %	3.6 %	0.291	0.291	8.000
315	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	8.000	80.000	0.26%	3.36%	0.269	0.269	8.000
316	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	5.000	50.000	0.12%	3.22%	0.161	0.161	5.000
317	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	20.000	200.000	-0.0 %	3.06%	0.612	0.612	20.000
318	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	10.000	100.000	0.03%	3.13%	0.313	0.313	10.000
319	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	2 .000	2 0.000	0.12%	3.22%	0.773	0.773	2 .000
320	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	5.000	50.000	0.89%	3.99%	0.200	0.200	5.000
321	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	8.000	80.000	1.00%	.10%	0.328	0.328	8.000
322	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	5.000	50.000	0.85%	3.95%	0.198	0.198	5.000
323	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	11.000	110.000	0.81%	3.91%	0. 30	0. 30	11.000
32	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	5.000	50.000	0.76%	3.86%	0.193	0.193	5.000
325	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	5.000	50.000	0.62%	3.72%	0.186	0.186	5.000
326	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	5.000	50.000	0.81%	3.91%	0.196	0.196	5.000
327	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	5.000	50.000	0.05%	3.15%	0.158	0.158	5.000
328	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	5.000	50.000	0.10%	3.20%	0.160	0.160	5.000
329	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	8.000	80.000	-0.30%	2.80%	0.22	0.22	8.000
330	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	3.000	30.000	-0. 9%	2.61%	0.078	0.078	3.000
331	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	13.000	130.000	-0. %	2.66%	0.3 6	0.3 6	13.000
333	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	5.000	50.000	-0.0 %	3.06%	0.153	0.153	5.000
33	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	8.000	80.000	-0.18%	2.92%	0.23	0.23	8.000
335	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	5.000	50.000	-0. 3%	2.67%	0.13	0.13	5.000
336	Cap tal loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan note instrument 2027	10	5.000	50.000	-0.62%	2. 8%	0.12	0.12	5.000
337	Cap tal loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 203	17	5.000	85.000	-0.15%	2.95%	0.1 8	0.1 8	5.000
338	Cap tal loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 203	17	5.000	85.000	-0.70%	2. 0%	0.120	0.120	5.000
339	Cap tal loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 203	17	5.000	85.000	-0.39%	2.71%	0.136	0.136	5.000
3 0	Cap tal loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 203	17	5.000	85.000	-0. 9%	2.61%	0.131	0.131	5.000
3 1	Cap tal loan note issued under GBP £600m Fixed Coupon Unsecured Loan note instrument 203	17	10.000	170.000	-0.67%	2. 3%	0.2 3	0.2 3	10.000
0	0	0	0.000	0.000	0.00%	0.00%	0.000	0.000	0.000
351	0								
00									
0									
401	0								
50									
0									
	0		0.000				0.000	0.000	0.000
0	0		0.000	0.000			0.000	0.000	0.000

0	0	0.0%

F	INDICA IVE IN ERES RA ES	
F1	Nominal interest	
F2	Cash interest	.7%
0	0	0.0%

G1	Floating rate debt as percentage of total debt	
G2	Fixed rate debt as percentage of total debt	1
G3	Index linked debt as percentage of total debt	0.0%
G	Fixed rate debt and index inked debt as percentage of total debt	1
G5	We ghted average years to matur ty	1000.0%
0	0	0

Table 19a – Analysis of Borrowings due after more than One Year

At 31 March 2017 NIW borrowings related to Capital Loan Notes issued under two loan note agreements, £1,280,200,000 Fixed Coupon Unsecured Loan note 2027 & £600m Fixed Coupon Unsecured Loan note 2034.

The Loan notes were issued under £600m Fixed Coupon Unsecured Loan Note 2034 facility in the period from April 2016 to 31 March 2017 as the £1,280,200,000 Fixed Coupon Unsecured Loan note 2027 facility expired on 31 March 2016.
Both facilities provide finance for capital investment only.

The loan note subscription agreements provides that the loan notes in issue before 31 March 2010 carry a fixed rate of interest of 5.25%. Loan notes issued after this date carry fixed interest rates based on a margin of 0.85% above the reference gilt rate published by UK HM Government Debt Management Office on the date of issue of the loan note.

In 2016/17 Capital loan notes were accounted for as held to maturity borrowings.

In addition to the capital loan note instrument, NIW had a committed facility available as a £20m overdraft, which is available to March 2021. That facility was not utilised during 2016/17.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 20 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
PROFIT AND LOSS ACCOUNT FOR YEAR ENDING 31 MARCH (TOTAL)

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
1	Turnover	£m	3	366.398	361.313	364.407	367.287	372.851				
2	Current cost operating costs (including CCD & IRC)	£m	3	-349.470	-343.723	-306.624	-315.156	-318.469				
3	Operating income	£m	3	0.303	0.208	0.488	0.091	-0.489				
4	Working capital adjustment	£m	3	2.641	2.001	0.840	1.516	3.032				
5	Current cost operating profit	£m	3	19.872	19.799	59.111	53.738	56.925				
6	O her income	£m	3	0.000	0.000	0.000	0.000	0.000				
7	Net interest receivable less payable	£m	3	-55.067	-48.580	-51.957	-53.609	-53.802				
8	Financing adjustment	£m	3	30.464	23.962	9.183	16.324	32.561				
9	Current cost profit before taxation	£m	3	-4.731	-4.819	16.337	16.453	35.684				
10	Current tax	£m	3	0.000	0.000	-0.017	-0.018	-0.012				
11	Deferred tax	£m	3	-24.872	13.798	-24.037	2.536	-6.431				
12	Current cost profit on ordinary ac ivities	£m	3	-29.603	8.979	-7.717	18.971	29.241				
13	Extraordinary items	£m	3	0.000	0.000	0.000	0.000	0.000				
14	Current cost profit attributable to shareholders	£m	3	-29.603	8.979	-7.717	18.971	29.241				
15	Dividends	£m	3	-26.587	-21.391	-21.562	-22.887	-21.510				
16	Current cost profit retained	£m	3	-56.190	-12.412	-29.279	-3.916	7.731				

Table 20 – CC Profit and Loss account for year ending 31 March 2017

There are no exceptional charges or income. Atypical and reorganisation costs are shown separately in the commentary to Table 21 and 22.

The calculation of the financing adjustment excludes dividends payable.

There are no minority interests.

PPP charges within operating costs line 2 can be summarised as follows:

	Gross Charge	Residual interest credit	Lease repayment	Capital maintenance	CC Depreciation	Net P&L Charge
	£m	£m	£m	£m	£m	£m
Alpha	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Omega	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Kinnegar	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Line 7 Net interest receivable less payable includes [redacted] interest payable on Alpha PPP finance lease.

Comparison with prior year results

	2016-2017	2015-2016	Variance
		£m	%
Turnover	372.851	367.287	1.5
CC Operating profit	56.925	53.738	5.9
CC profit/(loss) attributable to shareholders	29.241	18.971	54.1
Dividends	(21.510)	(22.887)	(6.0)
CC gain/(loss) retained	7.731	(3.916)	297%

Sales have increased in 2016 by £5.564m (1.5%) due to:

- Increase in unmeasured household income £0.800m
- Increase in unmeasured non-household income £0.488m
- Increase in measured non-household income £3.920m
- Decrease in trade effluent income (£0.279m)
- Decrease in large user income (£0.181m)
- Increase in other income £0.816m

  Total increase **£5.564m**

(See Table 23 for detail on water and sewerage income changes)

Operating costs have risen by £3.313m (1.1%) over the same period and the overall impact is that the CC operating profit margin has increased from 14.6% to 15.3%. As in previous years the overall focus on cost reduction throughout the business has continued during 2016-17 although overall operating costs before taking account of IRC, CCD and

amortisation have risen by £3.4m from £183.4m to £186.8 (1.9%). Some of the main changes in operating costs in 2016 include:

- Employment costs have fallen by £2.3m (9.6%)
- Power costs have fallen by £3.0 m (9.9%)
- Hired and Contracted services have increased by £1.1m (7.0%)
- Rates costs have fallen by £0.6m (2.6%)
- General and support costs have risen by £5.8m (16.5%)
- Other Business Activities have fallen by £0.154m (12.7%)
- Doubtful debts have increased by £0.8m (290.9%)
- IRC has fallen by £0.278m (1.1%)

The loss attributable to shareholders in 2015-16 of £3.916m has changed to a profit attributable to shareholders of £7.731m in 2016-17 (an increase in profitability of £11.647m or 297.4%) primarily due to:

- Net interest payable increase by £0.2m.
- Deferred tax has moved from a credit of £2.5m to a charge of £6.4m increasing costs year on year by £8.9m.
- Decrease in cc profit on disposal of £0.6m.
- Operating costs increase by £3.3m.

Offset by:

- Working capital and financing adjustments increased by £17.753m
- Sales increase of £5.564m.
- Dividends decrease of £1.4m

There was a dividend declared and approved for 2015/16 of £23.262m (accounted for in 2016-17) with £21.510m attributed to appointed activities.

Cost components in Operating Costs

The following cost components of Line 2 (£318.469m) exceed £5m in 2016-17:

Employment Costs	21.405m*^
Power	26.872m*
Rates	25.861m*
Contractors	17.036m*
Customer services	8.848m
Materials and consumables	5.249m
General and support expenditure	40.895m
PPP Operating Charges –Alpha	[redacted]
PPP Operating Charges –Omega	[redacted]
IRC	25.008m
Current cost depreciation	110.854m
Total	[redacted]

([redacted] ***of total Operating Costs)***

***** includes an amount relating to unappointed activities that cannot be extracted out for the summary above.

^ stated before an amount is capitalised (see later in commentary).

^^ stated net of residual interest credit.

Voluntary Early Retirement and Pension

The VER schemes in 2016/17 and 2015/16 can be summarised as follows:

	2016-17	2015-16
Number	2*	2*
Non pension element	-	-
Pension element	£0.301m	£0.468m
Total	£0.301m	£0.468m

* [redacted] ill health retirees (2015/16- [redacted] ill health retirees).

Voluntary Severance (VS) Scheme

The VS schemes in 2016/17 and 2015/16 can be summarised as follows:

	2016-17	2016-17	2016-17	2015-16	2015-16	2015-16
	VS Under 55	VS 60+	**Total**	VS Under 55	VS 60+	**Total**
Number	-	9	9	-	7	7
Total	-	£0.266m	£0.266m	-	£0.115m	£0.115m

The future VER/VS schemes are still to be finalised.

The total costs, payments and accruals for VER and VS are as follows:

	2016-17	2015-16	2016-17	2015-16
	VER	**VER**	**VS**	**VS**
Total Cost	£0.301m	£0.468m	£0.266m	£0.115m
Payments in year	Nil	Nil	£0.064m	£0.059m
Accrual at year end due to employees	Nil	Nil	£0.202m	£0.056m
Accrual at year end due to pension fund	£0.301m	£0.468m	Nil	Nil

The entries for the pension related elements of VER and the change in the pension asset (before deferred tax) over the year can be summarised as follows:

	BS	BS	BS	P&L	P&L	P&L	P&L	P&L
	A/C 2956	A/C 1752	A/C 3119	A/C 5117	A/C 5155	A/C 5140	A/C 4511	TOTAL
	£m	£m	£m	£m	£m	£m	£m	£m
Opening Deficit-pension	(7.171)							
Current Service Costs	(9.704)			2.400	6.737	0.567		9.704
Admin. Costs	(1.352)				1.352			1.352
Past Service Credit	(1.217)					1.217		1.217

Paid	9.865	(9.865)						(9.865)
Net Finance Interest Cost	(0.226)						0.226	0.226
Actuarial Gain	(56.179)		56.179					
Closing Liability-pension	(65.984)							

Key to Account codes

Code		
2956	BS	Pension
1752	BS	Bank
3119	BS	STRGL
5150	P&L Acct	Salaries- Basic
5117	P&L Acct	Superannuation – Industrial
5155	P&L Acct	Superannuation – Non Industrial
5140	P&L Acct	Retirement –movement in provision
4511	P&L Acct	Interest Received

There are no non-pension related lump sums in relation to VER 2016/17 as the two leavers left under ill-health retirement with pension fund payments only.

The accounting entries for the VS schemes for 2016/17 are as follows:

Dr 5140 Retirement movement in provision	£0.266 m
Cr 1752 Bank	£0.064 m
Cr 2313 Accruals	£0.202 m

NIW Pension Fund

The Statutory Accounts at 31 March 2017 (Notes E2 & G3) shows a full disclosure for the NIW pension fund. An extract of this is shown below:

Movements in fair value of plan assets

	Total year to 31 March 2017	**Total year to 31 March 2016**
	£000	**£000**
At the beginning of the year	**207,562**	**204,113**
Movement in year		
Expected return on assets	**-**	**-**
Interest on pension scheme assets	**7.800**	**7,006**
Contributions by plan participants	**1,404**	**1,083**
Contributions by employer	**9,865**	**10,326**
Actuarial gain/(loss)	**21,069**	**(10,312)**
Benefits paid	**(6,551)**	**(3,885)**
Settlement payments from plan	**-**	**-**
Administrative expenses and insurance	**(1,455)**	**(769)**
	239,694	**207,562**

Movement in present value of defined benefit obligations

	Total year to 31 March 2017	Total year to 31 March 2016
	£000	£000
At the beginning of the year	**214,733**	**215,743**
Movement in year		
Current service cost	**9,704**	**11,175**
Interest on scheme liabilities	**8,026**	**7,406**
Past service costs	**1,217**	**(1,129)**
Actuarial (gain)/loss	**77,248**	**(15,660)**
Contributions by plan participants	**1,404**	**1,083**
Benefits paid	**(6,551)**	**(3,885)**
Settlement payments from plan	**(103)**	**-**
	305,678	**214,733**

Scheme assets and liabilities

	Total at 31 March 2017	Total at 31 March 2016
	£000	£000
Equities	**77,372**	60,998
Corporate bonds	**30,774**	27,831
Gilts	**66,255**	55,455
Other	**42,537**	41,640
Property	**22,756**	21,638
Total market value of assets	**239,694**	207,562
Actuarial value of liabilities	**(305,678)**	(214,733)
Surplus/ (deficit) in the scheme - pension asset / (liability)	**(65,984)**	(7,171)
Related deferred tax (liability)/asset	**11,217**	1,291
Net pension asset / (liability)	**(54,767)**	(5,880)

The year-end pension liability as shown above before deferred tax is £65.984m.

There have been no pension costs directly allocated to non-appointed costs as management consider that the cost of obtaining this information would outweigh any benefits of it being available. However, the operating costs attributed to non-appointed activities would include an apportionment of pension costs.

Business Improvement costs

Business improvement costs are not analysed through the Oracle financial system but are separately identified at month end for reporting purposes only. These costs are included within line 2 – current cost operating costs and can be summarised as follows:

	£m
Salaries	1.651
Hired and contracted	0.830
Materials and Equipment	0.005
Other costs of employment	0.024
Other expenses	0.020
Total	**2.530**

Reprofiling of costs may occur during the year as part of the quarterly reforecasting process.

Capitalisation of costs

During 2016/17, £12.510m of costs were capitalised from the profit and loss account. This can be broken down as follows:

Cost	**£m**
Staff Costs	10.344
Labour charge	0.177
Temporary staff	0.233
Consultants	-0.007
Overheads capitalised	1.763
Total	**12.510**

The majority of costs capitalised relate to staff costs and overheads. These costs relate to the NIW staff who spend their time on capital projects e.g. Engineering Procurement or Asset Management staff. These costs will add to the value of the completed asset.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 21 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - WATER SERVICE (NIW Only)

	DESCRIPTION	UNITS	DP	1 WATER RESOURCES & TREATMENT	2 WATER DISTRIBUTION	3 WATER SERVICE TOTAL
	SERVICE ANALYSIS - WATER					
A	**DIRECT COSTS**					
1	Employment costs	£m	3	3.615	8.842	12.457
2	Power	£m	3	4.379	3.092	7.471
3	Agencies	£m	3	0.000	0.000	0 000
4	Hired and contracted services	£m	3	2.745	5.835	8 580
5	Associated companies	£m	3	0.000	0.000	0 000
6	Materials and consumables	£m	3	3.576	0.492	4 068
7	Service charges	£m	3	0.663	0.007	0 670
8	Bulk supply imports	£m	3	0.000	0.000	0 000
9	Other direct costs	£m	3	0.006	0.037	0 043
10	Total direct costs	£m	3	14.984	18.305	33 289
11	General and support expenditure	£m	3	8.974	10.224	19.198
12	Functional expenditure	£m	3	23.958	28.529	52.487
B	**OPERATING EXPENDITURE**					
13	Customer services	£m	3			4 660
14	Scientific services	£m	3			1.424
15	Other business activities	£m	3			0 558
16	Total business activities	£m	3			6 642
17	Rates	£m	3			8 887
18	Doubtful debts	£m	3			0 279
19	Exceptional items	£m	3			0 000
20	Total opex less third party services	£m	3			68 295
21	Third party services - opex	£m	3			0 001
21a	PPP Unitary Charges (Opex element)	£m	3			
22	Total operating expenditure	£m	3			68 296
22a	Payment by concessionaire to operator	£m	3			
C	**OPEX)**					
23	Reactive and planned maintenance infrastructure	£m	3	0.000	7.710	7.710
24	Reactive and planned maintenance non-infrastructure	£m	3	0.801	4.576	5 376
D	**CAPITAL MAINTENANCE**					
25	Infrastructure renewals charge (excluding third party services)	£m	3	10.253	0.000	10 253
26	Current cost depreciation (allocated)	£m	3	19.471	21.266	40.737
27	Amortisation of deferred credits	£m	3			-1 608
28	Amortisation of intangible assets	£m	3			0 000
29	Business activities current cost depreciation (non-allocated)	£m	3			0 247
30	Capital maintenance excluding third party services	£m	3			49 629
31	Third party services - current cost depreciation	£m	3			0 000
32	Third party services - infrastructure renewals charge	£m	3			0 000
33	Total capital maintenance	£m	3			49 629
34	Total operating costs	£m	3			117 856

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 21 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - WATER SERVICE - (PPP Only)

	DESCRIPTION	UNITS	DP	1 WATER RESOURCES & TREATMENT	2 WATER DISTRIBUTION	3 WATER SERVICE TOTAL
	SERVICE ANALYSIS - WATER					
A	DIRECT COSTS					
1	Employment costs	£m	3			
2	Power	£m	3	4 685	0.000	4.685
3	Agencies	£m	3			
4	Hired and contracted services	£m	3			
5	Associated companies	£m	3			
6	Materials and consumables	£m	3			
7	Service charges	£m	3	0 083	0.000	0.083
8	Bulk supply imports	£m	3			
9	Other direct costs	£m	3	0 000	0.000	0.000
10	Total direct costs	£m	3	4.768	0.000	4.768
11	General and support expenditure (NIW Only)	£m	3	0 072	0.000	0.072
12	Functional expenditure	£m	3	4 840	0.000	4.840
B	OPERATING EXPENDITURE					
13	Customer services	£m	3			
14	Scientific services	£m	3			0.000
15	Other business activities	£m	3			
16	Total business activities	£m	3			0.000
17	Rates	£m	3			7.226
18	Doubtful debts	£m	3			
19	Exceptional items	£m	3			
20	Total opex less third party services	£m	3			12.066
21	Third party services - opex	£m	3			
21a	PPP Unitary Charges (Opex element)	£m	3			[redacted]
22	Total operating expenditure	£m	3			[redacted]
22a	Payment by concessionaire to operator	£m	3	[redacted]	[redacted]	[redacted]
C	OPEX)					
23	Reactive and planned maintenance infrastructure	£m	3			
24	Reactive and planned maintenance non-infrastructure	£m	3			
D	CAPITAL MAINTENANCE					
25	Infrastructure renewals charge (excluding third party services)	£m	3	0 000	0.000	0.000
26	Current cost depreciation (allocated)	£m	3	4 331	0.000	4.331
27	Amortisation of deferred credits	£m	3			0.000
28	Amortisation of intangible assets	£m	3			0.000
29	Business activities current cost depreciation (non-allocated)	£m	3			0.000
30	Capital maintenance excluding third party services	£m	3			4.331
31	Third party services - current cost depreciation	£m	3			0.000
32	Third party services - infrastructure renewals charge	£m	3			0.000
33	Total capital maintenance	£m	3			4.331
34	Total operating costs	£m	3			[redacted]

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 21 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - WATER SERVICE - (TOTAL)

	DESCRIPTION	UNITS	DP	1 WATER RESOURCES & TREATMENT	2 WATER DISTRIBUTION	3 WATER SERVICE TOTAL
	SERVICE ANALYSIS - WATER					
A	DIRECT COSTS					
1	Employment costs	£m	3	3.615	8.842	12.457
2	Power	£m	3	9.064	3.092	12.156
3	Agencies	£m	3	0.000	0.000	0.000
4	Hired and contracted services	£m	3	2.745	5.835	8.580
5	Associated companies	£m	3	0.000	0.000	0.000
6	Materials and consumables	£m	3	3.576	0.492	4.068
7	Service charges	£m	3	0.746	0.007	0.753
8	Bulk supply imports	£m	3	0.000	0.000	0.000
9	Other direct costs	£m	3	0.006	0.037	0.043
10	Total direct costs	£m	3	19.752	18.305	38.057
11	General and support expenditure	£m	3	9.046	10.224	19.270
12	Functional expenditure	£m	3	28.798	28.529	57.327
B	OPERATING EXPENDITURE					
13	Customer services	£m	3			4.660
14	Scientific services	£m	3			1.424
15	Other business activities	£m	3			0.558
16	Total business activities	£m	3			6.642
17	Rates	£m	3			16.113
18	Doubtful debts	£m	3			0.279
19	Exceptional items	£m	3			0.000
20	Total opex less third party services	£m	3			80.361
21	Third party services - opex	£m	3			0.001
21a	PPP Unitary Charges (Opex element)	£m	3			[redacted]
22	Total operating expenditure	£m	3			[redacted]
22a	Payment by concessionaire to operator	£m	3	[redacted]	[redacted]	[redacted]
C	OPEX)					
23	Reactive and planned maintenance infrastructure	£m	3	0.000	7.710	7.710
24	Reactive and planned maintenance non-infrastructure	£m	3	0.801	4.576	5.376
D	CAPITAL MAINTENANCE					
25	Infrastructure renewals charge (excluding third party services)	£m	3	10.253	0.000	10.253
26	Current cost depreciation (allocated)	£m	3	23.802	21.266	45.068
27	Amortisation of deferred credits	£m	3			-1.608
28	Amortisation of intangible assets	£m	3			0.000
29	Business activities current cost depreciation (non-allocated)	£m	3			0.247
30	Capital maintenance excluding third party services	£m	3			53.960
31	Third party services - current cost depreciation	£m	3			0.000
32	Third party services - infrastructure renewals charge	£m	3			0.000
33	Total capital maintenance	£m	3			53.960
34	Total operating costs	£m	3			[redacted]

Tables 21 & 22 Activity Costing Analysis – Water & Sewerage Service

The costs in Tables 21 & 22 are populated with the updated information available at 18th May 2017 for the year ended 31st March 2017.

Allocation of costs between expenditure types

Expenditure is classified as capital expenditure if it satisfies the following criteria:

- It exceeds the threshold limit set at £1,000 (Note: land has a capital threshold of zero) and,
- It was used for one of the following purposes:
    1. Initial construction or purchase of a fixed asset (e.g. land, buildings, vehicles, plant, computers);
    2. Extension of a fixed asset which increases its size or operating capacity;
    3. Improvement of a fixed asset beyond the assets original condition on construction or acquisition;
    4. To substantially extend the original life of a fixed asset;
    5. To renew or replace an existing fixed asset;
    6. Contributions paid to another body towards the cost of work that would be fixed asset expenditure were it undertaken by NI Water, provided that the resultant ownership of the assets is vested in NI Water.

Some items, individually, may be valued at less than £1,000 but because they form part of an operational configuration, they should be capitalised; for example workstations, which comprise a monitor, keyboard, central processor, mouse and printer, should be capitalised.

Cost includes own work capitalised comprising the direct costs of materials, labour and applicable overheads. Interest costs relating to the acquisition of fixed assets have not been capitalised in AIR17. This is consistent with past years.

Fixed assets comprise:

- Infrastructure assets
  Infrastructure assets comprise a network of systems consisting of mains and sewers, impounding and pumped raw water storage reservoirs, sludge pipelines and sea outfalls. The infrastructure renewals charge for infrastructure assets is included in Tables 21 and 22 and is the estimated level of annual expenditure required to maintain the operating capability of the network, which is based on the Company's Asset Management Plan.
- Other assets
  Other assets comprise:
  a) Land and non-operational buildings,
  b) Operational assets (consisting of sites used for water and wastewater treatment, pumping or storage where not classified as infrastructure), and
  c) Vehicles, mobile plant and equipment.

Allocation of costs between service areas

All costs entered to NI Water's Oracle General Ledger (GL) have a 5-segment coding combination (account, cost centre, service activity, location and project). For the purpose of Tables 21 & 22 Opex costs from the General Ledger have been allocated between Water and Sewerage services and between service areas within the Water and Sewerage

activities by mapping NI Water's Oracle General Ledger to the tables using the coding structure.
Expense Groups are mapped to the NIAUR cost categories – **Appendix 1** provides details of this mapping. The Services Activities segment is mapped to the NIAUR service areas – **Appendix 2** provides details of this mapping.

The only exception to this is in direct General & Support expenditure, which can relate to more than one service area or activity. These costs are collated into 5 separate 'Overhead Pots' and are apportioned either on the basis of the directly coded spend; on the basis of the total direct costs or in the case of M&E function costs using a split provided by the business. The quantum of the apportionment of the general Overhead Pots has increased from AIR16 to AIR17 (by circa £5.5M). This is explained in the General & Support section further on in the commentary. The table below shows the basis of apportionment of 'indirect' General & Support expenditure between service activities in AIR17.

Allocation of General and Support	Water		Sewerage			
Description	R&T	Distribution	Sewerage	Sewage Treatment	Sludge Treatment & Disp	Comments
BASIS - Total Direct Costs	26 8%	25 8%	17.5%	24 5%	5 3%	
G&S Overhead Pot 1	26 8%	25 8%	17.5%	24 5%	5 3%	Non ops general spend. Excludes CS, SS & Regulation
G&S Overhead Pot 2a - Water	51%	49%	0.0%	0 0%	0 0%	Water related activities only
G&S Overhead Pot 2b - Sewerage	0 0%	0 0%	36.9%	51 8%	11 3%	Sewerage activities only
G&S Overhead Pot 3 - SA 390	26 8%	25 8%	17.5%	24 5%	5 3%	Water and sewerage networks spend only
G&S Overhead Pot 3 - M&E	6 3%	18.1%	23.6%	52 0%	0 0%	M&E Split as supplied by M&E Function

The percentage splits in AIR17 used to allocate General & Support expenditure are consistent with AIR16. The allocation to Water from General & Support Overhead Pot 1, which contains approx. 73% of the costs, remains consistent with AIR16. The main change in allocations from AIR16 is in the allocation of G&S Overhead Pot 3 M&E, which has increased its allocation to sewerage from 73% in AIR16 to 75.6% in AIR17. This is due to a revision of the split as advised by the M&E Function based on their activity carried out in the various Functions during the financial year. Further explanation is detailed later in the commentary.

The costs of the CRC Energy Efficiency Scheme are included within Power.

During the year, NI Water incurred less than £0.1M in fines, associated costs and provisions for fines. These costs are included within General & Support costs. In 2016/17 NI Water has not paid any fines under the Streetworks (NI) Order.

Allocation of costs to business activities and rates

All costs that relate to business activities e.g. Customer Services, Scientific Services and Regulation, were collated using the relevant cost centre segment from the Oracle General Ledger. The total expenditure attributable to these activities is apportioned to Water and Sewerage on the basis of the directly coded spend. This basis is consistent with past returns. The allocation to Water has increased slightly from 51.0% in AIR16 to 52.7% in AIR17 while allocation to Sewerage has decreased slightly from 49.0% in AIR16 to 47.3% in AIR17.

The table below shows the basis of apportionment for AIR17.

Apportionment of business activities	Water		Sewerage		
Description	R&T	Distribution	Sewerage	Sewage Treatment	Sludge Treatment & Disp
BASIS - Total spend (Includes general & Support)	26.6%	26.1%	17.4%	24.5%	5.4%
Apportionment					
Water / Sewerage split	52.7%		47.3%		

Rates were allocated between Table 21 and Table 22 using the rates bills. The rates charge can be specifically identified from the rates bill. In AIR17, overall rates are split 62.3% Water and 37.7% Sewerage which is a slight variation from the AIR16 split of 59.5% Water 40.5% Sewerage. The reason for the change is due to ongoing work with Land & Property Services (LPS), which has resulted in a more refined basis for the accrual for unbilled WWTWs.

Allocation of costs to unappointed activities

A final allocation of costs has been made to unappointed activities based on an assumption that these activities are either charged on a full cost recovery basis, and thus costs broadly mirror income generated, or the income does not give rise to any additional operational costs (e.g. rents received or fishing rights). This is consistent with previous AIR returns.

Atypical costs and provisions:

2016/17 atypical costs and credits

Description	Amount	Comment
IHR related costs.	£0.3M	Costs incurred releasing employees via the Ill Health Retirement scheme.
VER / VS costs.	£0.3M	Costs incurred releasing employees via the VER / VS schemes.
BI consultancy.	£0.8M	Only BI related consultancy costs are deemed to be atypical. In addition to consultancy costs, NIW also incurred £1.6M in staff related costs and £0.1M in other cost, in order to deliver the BI (ACE) programme in 2016/17.
PPP atypicals.	£0.4M	Primarily relating to performance deductions. See PPP section of this commentary for further information.
Project Clear.	[redacted]	Technical & legal advisors costs in relation to Project Clear, which is a one off project relating to the potential acquisition of Project Alpha.
RPDM credit.	(£0.3M)	Balance of 2015/16 accrual released in 2016/17.
UR credit.	(£0.3M)	Balance of 2015/16 accrual released in 2016/17.
One off legal fees.	£0.5M	Legal & Professional fees in relation to a specific legal case (confidential/sensitive in nature)
Other atypical costs.	£0.3M	Operating expenditure incurred on decommissioned assets. The expenditure would normally be capitalised.
Total	£2.7M	

Business Improvement (BI) Programme.

The Business Improvement Programme, also known as ACE (Achieving Customer Excellence) seeks to address four strategic strands:

- Improve services to Customers;
- Develop the NI Water people;
- Build a more efficient and effective organisation; and
- Exceed, where possible, quality compliance standards.

Total opex on the BI Programme in AIR17 was £2.5M, which is £0.8M higher than AIR 16 (£1.7M). This is due to an increase in Employment Costs (£0.3M) and Consultant Fees (£0.5M).

Voluntary Early Retirement / Voluntary Severance / Ill Health retirement

During 2016/17 NI Water further reduced the workforce resulting in the release of Voluntary Early Retirement (VER), Voluntary Severance (VS) and Ill Health Retirement schemes. Further details on the staff reduction programme is contained within the Annual Report.

The payments made during the year totalled £0.6M in relation to the 2016/17 scheme, which is consistent with the charge for AIR16.

Negative Opex

NIW generate income from the sale of electricity and Renewable Obligation Certificates (ROCs) by way of water turbine and solar installations. In 2016/17, this income amounted to £0.3m, which is consistent with AIR16.

Employment Costs

Staff costs for total NI Water come to circa £49.5M as detailed below which is slightly increased from AIR16 (£48.7M). These costs include the £0.6M VER\VS and ill-health costs outlined above. Only circa £21.4M is included in Employment Costs (Line 1) in Tables 21 & 22 (AIR16 circa £23.6M).

The table below provides the reconciliation between these amounts:

Description	Amount	Table 21/22 location
Industrial Wages	£16.6M	
Salaries	£29.8M	
Temporary Staff	£1.2M	
Other Costs of Employment	£0.8M	
Staff Expenses	£1.1M	
Total NI Water staff costs	**£49.5M**	
Less:		
Customer Services	(£3.9M)	Customer Services
Scientific Services	(£1.4M)	Scientific Services
Regulation	(£0.5M)	Other Business Activities
Unallocated	(£22.3M)	General & Support
Total Employment Costs	**£21.4M**	**£12.5M Table 21 and £8.9M Table 22**

The unallocated amount of circa £22.3M is included in General & Support and has been apportioned between Table 21 and 22, across each of the columns, based on total direct costs, with the exception of M&E Employment costs which are allocated on the basis of a split provided by the business.

Total NI Water staff costs have increased by approximately £0.8M from AIR16 due to an increase in Salaries of £2.8M and Temporary Staff of £0.2M, which was offset by an decrease of £2.2M in Industrial Wages.

The decrease in Industrial Wages was due to the provision made for holiday pay on overtime in AIR16. Salaries have increased due to the annual inflationary pay rise and an ER NIC increase due to abolition of the "contracting out" element of NIC calculations.

Hired & Contracted

Hired and Contracted Services of circa £17.5M in Table 21 and Table 22 are split out in the table below. The corresponding charge in the AIR16 was circa £16.2M.

Hired & Contracted Services:	**Table 21**	**Table 22**	**TOTAL**
Operational Contractors	£8.3M	£8.7M	£17.0M
Other Contractors	£0.3M	£0.1M	£0.4M
Consultants	£0.0M	£0.0M	£0.0M
TOTAL	**£8.6M**	**£8.8M**	**£17.4M**

Within the Operational Contractors costs of £8.3M in Table 21, circa £2.7M relates to the cost of contractors for Water Treatment with the balance being the cost for the hire of plant and contractors to facilitate the maintenance of the networks. This is an increase of £0.6M from AIR16 that will be explained in Table 21 Line 4 below. Within the Operational Contractors cost of £8.8M in Table 22, circa £1.9M is for the cost of the various Sludge Disposal Routes, circa £4.3M is for the maintenance of the Sewerage network and the balance relates to the costs of Sewage Treatment (including the costs of Skip Hire etc.). This is consistent with AIR16.

There is no spend on Consultants Fees within Hired and Contracted in AIR17.

General & Support Costs

General & Support costs have increased by circa £5.5M from AIR16 (£35.1M) to AIR17 (£40.9M). The principal costs in this expenditure line are:

Description	**Amount**	**Table 21/22 location**
Unallocated Employment Costs	£22.2M	Included in General & Support (Removed from Employment Costs)
Unallocated Power	£0.3M	Included in General & Support (Removed from Power Costs)
Unallocated Hired & Contracted Costs	£7.9M	Included in General & Support (Removed from Hired & Contracted)
Unallocated Materials & Consumables	£1.9M	Included in General & Support (Removed from Materials & Consumables)
Unallocated Other Direct Costs	£5.9M	Included in General & Support (Removed from Other Direct Costs)
V&P Repairs	£0.7M	General & Support

Mobile V&P Charges	£1.3M	General & Support
Other	£0.7M	General & Support
Total	**£40.9M**	**£19.3M Table 21 and £21.6M Table 22**

General & Support costs were apportioned across Table 21 & Table 22 based on either the total direct costs allocated to each column or in the case of the M&E Function based on a split as supplied by the Function. Service Activities are mapped to the NIAUR service areas in **Appendix 2**. This approach was consistently applied to both AIR17 and AIR16. See the **Allocation of costs between service areas** section at the start of the commentary.

The main increases from AIR16 are in Unallocated Employment Costs (£2.6M increase) Unallocated Hired & Contracted Costs (£1.7M increase) and Unallocated Other Direct Costs (£1.3M increase).

The increase in Unallocated Employment Costs have been explained under Employment Costs. Unallocated Hired & Contracted Costs have increased mainly in Consultants Fees (£1.2M) due to work on Project Clear and within the ACE programme in Business Improvement. The increase in Unallocated Other Direct Costs is mainly due to Office and Computer Services (£0.5M) for increased maintenance and support contract costs and Legal and other Professional fees (£0.8M) as mentioned above in Atypical costs.

Table 21 – NI Water Total

A - Direct Costs

Table 21 Total Expenditure in AIR17 has increased by circa £4.3M from AIR16 to AIR17. This is mainly driven by a number of substantial increases in General and Support Costs of £3.5M, Hired and Contracted Services of £1.1M and PPP Unitary Charges (Opex element) of [redacted] being off-set by a reduction in Employment costs of £1.7M and various other variances which are explained on a line by line basis below:

- Line 1: Employment costs have decreased by circa £1.7M from AIR16. This is due to the provision for holiday pay on overtime being provided for in AIR16 as discussed above.
- Line 2: Power costs include electricity costs, fuel costs for power generation and costs for the CRC Energy Efficiency Scheme. Overall, the costs have reduced by £0.3M from AIR16. The main reason for the reduction is due to reduced energy tariffs.
  Power costs include £4.7M related to PPP.
- Line 3: Agencies – there are no costs in this line.
- Line 4: Hired and Contracted Services have increased by circa £1.1M from AIR16. The increase has been driven by an increase in both Water Resources & Treatment (WRT) of £0.6M and an increase of £0.5M in Water Distribution (WD). The main reason for the increase in both WRT and WD was expenditure on civils works at numerous plants and site maintenance.
- Line 5: Associated companies – there are no costs in this line.
- Line 6: Materials & Consumables have remained constant with AIR16.
- Line 7: Service Charges – the costs are £0.8M with the majority of the costs in WRT for abstraction licences. These are consistent with AIR16. Service Charges include circa £0.1M for PPP.
- Line 8: Bulk Supply imports – there are no costs in this line.
- Line 9: Other Direct Costs are immaterial and in line with AIR16.
- Line 10: Total Direct Costs – this is a calculated line and is the total of Line 1-9. AIR17 direct costs are £0.9M less than AIR16. This is driven by the decrease in Employment Costs that have been off-set by the increases in the Hired and Contracted as detailed above.
- Line 11: General & Support expenditure has increased by circa £3.5M from AIR16 to AIR17. The reason for the increase in the costs in Table 21 is the increase in the overall General & Support expenditure (as already discussed) combined with the changes in allocation.

  The percentages used are calculated on the total of Direct Costs for General & Support Pot 1 & 2, which have remained in line with AIR16. However, General & Support Pot 3 M&E has changed marginally from AIR16. WRT has decreased from 8% to 6.3% while WD has also decreased marginally from 19% to 18.1% resulting in a total decrease for Table 21 of circa 3%. See the Allocation of costs between service areas section at the start of the commentary. Service Activities are mapped to the NIAUR service areas in **Appendix 2**.
  The NI Water total costs are immaterial for PPP.
- Line 12: This is the calculated total line for functional expenditure, which has increased by £2.6 M from AIR16 as a result of the increase in General, & Support Costs as explained in Line 11 above. Line 12 includes £4.8M of costs associated with PPP (AIR16 £4.7M).

B - Operating Expenditure

- Line 13: Customer Services costs have increased by circa £0.4M compared to AIR16 in Table 21. Customer Services costs are apportioned based on the percentage of direct costs from Table 21 & 22 and are broadly in line with the split in previous years. In AIR17, the percentage split was calculated at 52.7% Table 21 and 47.3% Table 22. In AIR16, the percentage split was 51.0% and 49.0% between Table 21 & 22 respectively.
- Line 14: Scientific Services costs have increased marginally by £0.1M from AIR16. Scientific Services costs have been split using the same percentage basis as Customer Services as detailed above in line 13.
- Line 15: Other Business Activities – Regulatory costs have remained unchanged from AIR16. These costs are apportioned on the same basis as Line 13 and Line 14.
- Line 16: Total Business Activities – this is a calculated line and is the total of Line 13, 14 and 15. The increase from AIR16 of circa £0.5M is driven by the increases as detailed above.
- Line 17: Local authority rates have increased by £0.3M in AIR17 from £15.8M in AIR16 to £16.1M in AIR17. Rates include circa £7.2M relating to PPP sites.
- Line 18: Doubtful debts have remained unchanged from AIR16. The doubtful debts have split between Table 21 and Table 22 on a specific line by line basis, consistent with what was done in AIR16.
- Line 19: Exceptional items – there are no costs in this line.
- Line 20: Total Opex less third party services – this is a calculated line and is the total of line 12,16,17,18 and 19. This has increased by circa £3.4M from AIR16 driven by the increases in the General & Support Costs as detailed above.
- Line 21: Third party services are immaterial.
- Line 21a: Total PPP Unitary Charge has increased by circa [redacted] from the AIR16 charge at [redacted] in AIR17. See Table 42 commentary for details.
- Line 22: Total operating expenditure, this is a calculated line and is the total of line 20, 21 and 21a. This line has increased by [redacted] from AIR17 mainly due to the increase in the General & Support Costs as discussed above. This agrees to Table 35 line 24.
  Total operating expenditure includes circa [redacted] relating to PPP (AIR16 [redacted]).
- Line 22a: This figure has increased by [redacted] from AIR16 and varies from year to year depending upon volumes of water dispatched, changes in the volumetric charge, deductions incurred and indexation. See Table 42 commentary for details.

C Reactive & Planned Maintenance

- Line 23: Infrastructure, this figure has increased by circa £0.6M from AIR16. This is as a result of an increase on spend on all the activities that feed into this line in WD. The increase is a combination of increased activity and rates.
- Line 24: Non-infrastructure, this figure has decreased by circa £0.2M from AIR16.

Leakage costs

Operating costs relating to leakage have increased marginally from £5.4M in AIR16 to £5.6M in AIR17. Capital expenditure has remained consistent from AIR16 to AIR17.

Table 22 – NI Water Total

A - Direct Costs

Total Expenditure in Table 22 has decreased by circa £0.9M from AIR16 to AIR17. This is mainly driven by an increase in General & Support Costs of £2.3M being off-set by a reduction in Employment Costs of £0.6M and Power costs of £2.6M and various other variances which are explained on a line by line basis below:

- Line 1: Employment costs have decreased in Table 22 by circa £0.6M from AIR16. This is due to the provision for holiday pay on overtime as being provided for in AIR16 as discussed above.
- Line 2: Power costs include electricity costs and fuel costs for power generation and costs for the CRC Energy Efficiency Scheme. Overall, the costs have decreased by £2.6M in AIR17 from AIR16. The main reason for the reduction is due to reduced energy tariffs and the drier weather in the latter part of the year resulting in reduced pumping at the WWTWs.

  In AIR17, the Wastewater Field Managers provided a percentage estimate of power costs between Sewage Treatment and Sludge Treatment at each of the WWTWs where there are both activities. These percentages were applied to the power costs to calculate the costs for each activity. This is the same rationale as AIR16.

  There is one electricity meter at Duncrue Street, which includes the costs for the Belfast WWTWs and the Incinerators, which are operated by PPP. The power team supplied an estimated 46:54 split between the Belfast WWTWs and the Incinerators (based on an estimated KWhr usage and a number of sub-meters) which has been used to calculate the amount relating to Sewage Treatment at Belfast and Sludge Treatment at the Incinerators. In AIR16 the estimated split was 44:56.

  Power costs include £3.0M for PPP (AIR16 £3.5M).

- Line 3: Agencies – there are no costs in this line.
- Line 4: Hired and Contracted services have remained the same as AIR16.
- Line 5: Associated companies– there are no costs in this line.
- Line 6: Materials & Consumables have increased marginally by £0.1M AIR16.
- Line 7: Service Charges – the costs are £0.8M and are consistent with AIR16. The vast majority of these fees relate to NIEA Discharge Consents.
- Line 8: Other Direct Costs are immaterial.
- Line 9: Total Direct Costs – this is a calculated line and is the total of lines 1-8. AIR17 direct costs are £3.3M lower than AIR16. This is driven by the reduction in Employment Costs and Power as detailed above.
- Line 10: General & Support expenditure has increased by circa £2.3M from AIR16 to AIR17. The reason for the increase in the costs in Table 22 is the increase in the overall General & Support expenditure (as already discussed).

  The percentages used are calculated on the total of Direct Costs for General & Support Pot 1 & 2, which have remained in line with AIR16. However, General & Support Pot 3 M&E has changed from AIR16. Sewerage has decreased significantly from 33% to 23.6% while Sewage Treatment has significantly increased from 42% to 52% resulting in a total increase for Table 22 of 3%. Service Activities are mapped to the NIAUR service areas in **Appendix 2**. See the **Allocation of costs between service areas** section at the start of the commentary. The NI Water Total costs include circa £0.3M for PPP. This is consistent with AIR16.

- Line 11: This is the calculated total line for Functional Expenditure, which has decreased by £1.0M. This decrease is driven by the decreases in Employment Costs and Power being off-set by the increase in General & Support Costs as discussed above. Line 11 includes costs of £3.3M associated with PPP (AIR16 £3.7M).

B - Operating Expenditure

- Line 12: Customer Services costs have increased by circa £0.1M compared to AIR16 in Table 22. Customer Services costs are apportioned based on the percentage of direct costs from Table 21 & 22. In AIR17, the percentage split was calculated at 52.7% Table 21 and 47.3% Table 22. In AIR16, the percentage split was 51.0% and 49.0% between Table 21 & 22 respectively.
- Line 13: Scientific Services costs have remained constant with from AIR16. Scientific Services costs have been split using the same percentage basis as Customer Services as detailed above in line 12.
- Line 14: Other Business Activities have decreased from AIR16 by circa £0.1M in Table 22. These costs have been apportioned on the same basis as line 12 and line 13.
- Line 15: Total Business Activities – this is a calculated line and is the total of Line 12, 13 and 14. There has decreased by circa £0.1M from AIR16.
- Line 16: Local authority rates have decreased by circa £1.0M from AIR16. The reason for the change is due to ongoing work with Land & Property Services (LPS). This has resulted in a more refined basis for the accrual for unbilled WWTWs and due to LPS carrying out a revaluation of all commercial properties in the financial year. Line 16 includes circa £1.1M for PPP rates.
- Line 17: Doubtful debts have increased from AIR16 by circa £0.8M. The doubtful debts have split between Table 21 and Table 22 on a specific line by line basis, consistent with what was done in AIR16.
- Line 18: Exceptional items– there are no costs in this line.
- Line 19: Total Opex less third party services – this is a calculated line and is the total of Line 11, 15, 16, 17 and 18. This has decreased by £1.2M from AIR16. This is primarily driven by the decrease in Power and Rates being off-set by the increase in General & Support Costs as detailed above.
- Line 20: Third party services are immaterial.
- Line 20a: Total PPP Unitary Charge has increased by circa [redacted] from AIR16. See Table 42 commentary for details.
- Line 21: Total operating expenditure, this is a calculated line and is the total of line 19, 20 and 20a. This line has decreased by [redacted] from AIR16.
  Total operating expenditure includes [redacted] of costs associated with PPP (AIR16 [redacted]).
- Line 21a: Payments to Operators for Sewerage Services has changed to reflect:
  i) The variation in flows (and loads; in the case of Kinnegar) received from the NIW Catchment upon which the Contractor / Concessionaire and Operators revenue payments are based;
  ii) Any non-performance issues encountered by either Operator under their own contract arrangements with the Contractor / Concessionaire.

  The costs have increased by [redacted] to [redacted] in AIR17.

C - Reactive & Planned Maintenance

- Line 22: Infrastructure, this figure has remained constant from AIR16 at £2.5M.
- Line 23: Non-infrastructure, this figure has decreased by circa £3.9M from AIR16 to £10.4M. There has been a £2.7M decrease in Sewerage and £1.2M decrease in

Sewage Treatment and is due to a decrease in M&E expenditure in both areas in the financial year.

Reactive and planned maintenance

The overall approach and allocation process for Tables 21 and 22 has remained consistent with AIR16. However, there remain some limitations to the coding, which means that some expenditure, for example building and ground maintenance, cannot be split separately.

Pensions

Pension costs per the actuarial information at 31st March 2017 were £12.5M (AIR16 £11.2M) which amounts to £12.3M before interest **costs** of £0.2M (AIR16 £10.8M before interest **costs** of £0.4M) and these were charged to the profit and loss account. This is made up of current service costs of £9.7M (AIR16 £11.9M) and past service costs of £1.2M (AIR16 (£1.1M)). These costs have been included in general and support costs and employment costs in Tables 21 and 22 on the basis outlined in the cost allocation section above.

The total employer pension contributions for the year were £9.9M (AIR16 £10.3M) including £0.5M relating to payment of 2015/16 past service costs.

These costs have been included in general and support costs and employment costs in Tables 21 and 22. Pension costs for those employees who can be directly attributed to service or business activities will be mapped directly to these areas via the wages and salaries codes as outlined in the cost allocation methodology. Pension costs that relate to either employees not engaged directly on service/business activities or that relate to past service costs (i.e. VER provision) will be apportioned to activities in line with the treatment of general and support expenditure as detailed in the cost methodology.

Pension costs and finance charges associated with employees involved with unappointed activities have not been specifically excluded from pension figures within the profit and loss account. However as noted in the costing section above an estimate of the costs of unappointed activities has been adjusted for during the costs allocation process and it has been assumed that an element of this allocation would cover pension costs.

The pension fund at 31st March 2017 has remained in a liability position.

Further disclosures on pensions are contained in the statutory accounts, which are based on the company's actuarial report at 31st March 2017.

Third party costs

Third party costs remain negligible in AIR17 and relate primarily to services recharged to third parties. The associated income is reported in Table 23 as third party income.

Infrastructure Renewals Charge (IRC)

See Commentary for Table 33.

Table 21 PPP only

Line 2 - Power costs

Power costs for the PPP Alpha sites of £4.685m has increased by 2.5% from the AIR16 figure. This reduction is largely related to an increase in volumes of water taken from PPP Alpha sites (circa 12%) offset by a reduction in rate (circa 10%).

Line 7 - Service charges

This line includes the costs of abstraction licences at each of the PPP Alpha sites. The figure has increased by an inflationary amount from AIR16.

Line 11 - General & support expenditure

General and support expenditure has been calculated on the same basis as in AIR16. Costs have increased significantly from AIR16 as a result of a change in methodology around capitalised salaries.

Line 14 - Scientific services

The company does not incur any net costs associated with scientific services for Alpha as costs are offset by a reduction in the payment to the PPP Concessionaire.

Line 17 - Rates

Rates costs have risen by 11% from AIR16. This is a direct result of an increased proportion of DI being taken from PPP sites. 45.3% of water was taken from PPP sites in 2016-17 compared to 41.5% in 2015/16.

Line 21a - PPP unitary charges (Opex)

This line data is drawn directly from the Company's accounts. No additional reconciliation is required.

During 2016/17 the Alpha Concessionaire recognised performance deductions of [redacted] and this is reflected in the [redacted] opex charge. The charge also includes atypical income of [redacted] as follows:

	[redacted]
Quality Monitoring Change credit	
EIB Step-down	
Refund in respect of reorganisation costs	
Total	

Further details on each of these are given in the commentary to table 42 line 10.

The increase of [redacted] in the unitary charge cost from AIR16 is made up as follows:

	[redacted]
Inflationary increase in capacity charge	
Increase in volumetric charge (inflation and flow related)	
Decrease in performance deductions	
Decrease in atypical credits	
Increase in amounts capitalised	
Decrease in interest element of charge	

Table 22 PPP only
Line 2 - Power costs

Power costs have reduced from AIR16 by 14.0% as a result of reduced tariffs in 2016/17 and lower wastewater volumes.

The historical 35% / 65% allocation of the Ballynacor site costs between Sludge & WW has been revised this year to reflect actual usage. 2015-16 actuals has been used as a proxy for 2016-17 as outturn reports are not available until July. This has reduced the allocation to sludge down from 35% to circa 10%. All other allocations are consistent with AIR16.

Kinnegar: Power costs are not recorded as (i) they are not paid directly by the Company and (ii) they are part of the Unitary Charge payment to the Concessionaire.

Line 8 - Other direct costs

Nil

Line 10 - General & support expenditure

The general and support expenditure has been calculated in the same way as for AIR16 reflecting all costs associated with P101 cost centre. These costs have increased from that reported in AIR16 due to a reduction in the level of salaries capitalised.

Total general and support costs associated with the Omega contract were calculated at £0.241m and two sevenths of this has been allocated to column 3 to reflect costs associated with Duncrue and Ballynacor sludge facilities, the remaining five sevenths are associated with the 5 Omega WWTW facilities.

Line 13 - Scientific services

Scientific Services costs reflect the contract sampling and analysis costs borne by the Company in providing its sampling and analytical contractual obligations to the Kinnegar and Omega Facilities in Service: Kinnegar, North Down, Richhill, Ballyrickard, Ballynacor and Armagh. This cost has increased from AIR16 as a result of the inclusion of sampling for the incinerator. This has increased the total proportion of PPP samples thereby increasing the costs allocated from R113 cost centre.

Line 16 - Rates

The rates figure for Kinnegar and each of the Omega sites were taken directly from the rates bills. The bill for the Duncrue site was allocated between PPP and NIW in line with the total area of the site occupied by PPP. PPP occupy 15% of the Duncrue site. The increase in rates cost in AIR17 is 1.7% and is largely inflationary related.

Line 20a - PPP unitary charges (Opex)

The charge for Kinnegar included in this line of [redacted] reflects the invoiced/accrued amounts for the year. These costs have been reduced by the credit for residual interest of [redacted].

The Omega charge of [redacted] reflects unitary charge invoiced and accrued of [redacted], performance deductions of £nil, the credit for residual interest of [redacted] and atypical costs of [redacted] as follows:

Performance Deductions Re-Accrued	[redacted]
North Down and Ards Disinfection Change	

Supplemental 4 Agreement
Change in Calibration Frequency
Credit releases
2016/17 out of spec sludges
Omega Adjudication
Other
Total

[redacted]

Further details on all of these atypical amounts are given in the commentary to line 10 of table 42.

The charge on this line has increased by [redacted] from AIR16. This movement can be summarised as follows:

Decrease in volumetric charge (inflationary and flow related)
Decrease in performance deductions
Increase in atypical costs
Increase in amounts capitalised

[redacted]

Appendix 1 – Expense group mapping

Expense Group	Desc	Table 21 & 22 mapping
511X	Industrial Wages	Employment
513X	Other Wage Costs	Employment
514X	Other Costs of Employment	Employment
515X	Salaries	Employment
516X	Non-Industrial Expenses	Employment
517X	Temporary Support Staff	Employment
611X	Cost Reallocations	Employment
612X	N/A	Employment
613X	N/A	Employment
614X	N/A	Employment
521X	Power	Power
531X	Operational Contractors	Hired and Contracted
532X	Other Contractors	Hired and Contracted
534X	Out sourcing	Hired and Contracted
538X	Consultants Fees	Hired and Contracted
541X	Materials and Equipment	Materials & consumables
544X	Non Operations Materials	Materials & consumables
547X	Stock Adjustments	Materials & consumables
548X	Chemicals	Materials & consumables
5562 & 5565	Environmental Regulator & Crown Estates	Service Charges
536X	Office and Computer Services	Other direct costs
537X	Legal and other professional fees	Other direct costs
551X	Accommodation	Other direct costs
553X	Insurance - Premiums	Other direct costs
553Y	Insurance - Claims	Other direct costs
554X	Public Liability	Other direct costs
555X	Employer's Liability	Other direct costs
616X	N/A	Other direct costs
695X	Management Task	Other direct costs
759X	Overheads Capitalised	Other direct costs
518X	Staff Training & Hospitality	General & support
533X	V&P repairs	General & support
539X	Audit	General & support
546X	Mobile V&P Charges	General & support
552X	Communication	General & support
556X	Other Grants and Subscriptions	General & support
557X	Advertising and Publicity	General & support
641X	Intra Departmental Notionals	General & support
651X	Inter Departmental Notionals	General & support
772X	Bad Debts	Doubtful debts
775X	Discount Allowed	Customer services
558X	Rates	Rates
5561	Regulatory Costs	Other Business Activities
534Y	PPP	PPP unitary charge

Appendix 2 – Service activity mapping

NIW Service Activity	Service Activity description	Table 21/22 Mapping
310	Pumping (Inc Highlift at WTW)	Water - Distribution
311	Service Resv Wat Tower Tanks	
312	Service Resv cleaning	
313	Distribution and Water Operations	
320	Repair and Maintenance (Mains Repair)	
321	Repair and Maintenance (Service Repair)	
322	Repair and Maintenance (Hydrant & Valve Repairs)	
323	R&M (NIFRS Hydrant & Valve Repairs)	
324	Repair and Maintenance (Mains Cleansing)	
326	Repair and Maintenance (Lead Replacement)	
331	Repair and Maintenance of 'Street Furniture' (Water)	
340	Leakage - Monitoring	
341	Leakage - Detection	
342	Hydrant & Valve Repairs as identified by	
343	Service Repairs as identified by active	
344	Mains Repairs as identified by active Le	
351	Consumer Meter Repair & Maintenance	
360	Investigations	
362	Customer Contacts excluding meter query	
363	Regulatory Plumbing Inspection	
380	'In House' Investigations and Attendance	
385	Health & Safety - Networks	
391	Networks Function Activity -Query	
399	Networks Stores	
920	Connection (Water)	
110	Impounding Reservoir	Water - Resource & Treatment
111	Loughs	
112	River Intakes	
113	Boreholes,Springs & Wells	
120	Repairs & Maint A/duct/Main	
140	Recreation & Amenity	
150	Water Treatment	
151	Water Sludge Treatment	
152	Water Sludge Disposal	
185	Health & Safety - Supply	
190	Supply Function Activity	
191	Supply Function Activity - Query	
822	Instrumental Control Activity M & E Water Supply	
410	Repair & Maintenance of Sewers	Sewerage - Sewerage
411	Blockage	
412	Desilting	
413	Inspection of Sewers	
414	Repair and Maintenance of 'Street Furniture' (Sewerage)	
415	Sewerage Tankering	
430	Pumping (Foul & Combined)	
431	Pumping (Surface Water)	
460	'In House' Investigations and Attendance	
462	Rodent Control	
940	Rechargeable (Sewerage)	
950	Connection (Sewerage)	
510	Sewage Treatment	Sewerage - Sewage Treatment
591	Waste Water Function Activity - Query	
620	Sludge Treatment - Tankering Between Works	Sewerage - Sludge Treatment
621	Sludge Treatment	
630	Sludge Disposal to Agricultural Land Transportation	
631	Instrumental Control Activity M & E WasteWater	
632	Sludge Cake Transportation to Landfill	
633	Sludge Cake Disposal to Landfill	
635	Sludge Logger Maintenance (Contract)	
636	Incinerator Sludge Treatment	
637	Sludge Disposal Tankering from Strategic Collection Centres to Dewatering Centres	
638	Sludge Cake Disposal to Incinerator	
639	Incinerator Ash Disposal to Landfill	
640	Private Septic Tank Desludging	Customer Services
710	General	
711	Customer Services (Meter Read & Customer Queries)	
712	Disconnection / Reconnection	
714	Consumer Meters Repair And Maintenance	
790	Customer Services Function Activity	
730	Water Analysis	Scientific Services
731	Sewerage General	
732	Labs Water & Sewerage General	
733	Sampling	
734	Labs Sewage Sampling	
003	Rates DRC - Water	Rates
013	Rates DRC - Sewerage	
910	Rechargeable Work	Third Party Opex
000	Default	Overhead Pot 1 - General
021	GAE	
023	Invest to Save Revenue	
810	Vehicle & Plant Maintenance	
811	Vehicle & Plant Accident Repair	
812	Garage Overheads	
813	Roads Service	
820	Telemetry	
890	TMG Function Activity	
050	Ops & Maint General (Water)	Overhead Pot 2 - Water
055	Ops & Maint General (Sewerage)	Overhead Pot 2 - Sewerage
585	Health & Safety - WW	
590	Waste Water Function Activity	
735	Trade Effluent	
821	Radio & Monitoring Wastewater	
390	Networks Function Activity	Overhead Pot 3 - Networks Water & Sewerage

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 22 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - SEWERAGE SERVICE (NIW Only)

	DESCRIPTION	UNITS	DP	1 SEWERAGE	2 SEWAGE TREATMENT	3 SLUDGE TREATMENT & DISPOSAL	4 SEWERAGE SERVICE TOTAL
	SERVICE ANALYSIS - SEWERAGE						
A	**DIRECT COSTS**						
1	Employment costs	£m	3	3 930	4.724	0 294	8.948
2	Power	£m	3	3 952	7.881	-0.127	11.706
3	Agencies	£m	3	0 000	0.000	0 000	0.000
4	Hired and contracted services	£m	3	4 300	2.514	1 912	8.726
5	Associated companies	£m	3	0 000	0.000	0 000	0.000
6	Materials and consumables	£m	3	0 222	0.460	0.499	1.181
7	Service charges	£m	3	0.132	0.468	0.189	0.789
8	Other direct costs	£m	3	0 007	0.016	0 000	0.023
9	Total direct costs	£m	3	12 543	16.063	2.767	31.373
10	General and support expenditure	£m	3	7 518	12.202	1 631	21.351
11	Functional expenditure	£m	3	20 061	28.265	4 398	52.724
B	**OPERATING EXPENDITURE**						
12	Customer services	£m	3				4.188
13	Scientific services	£m	3				1.179
14	Other business activities	£m	3				0.501
15	Total business activities	£m	3				5.868
16	Rates	£m	3				8.666
17	Doubtful debts	£m	3				0.225
18	Exceptional items	£m	3				0.000
19	Total opex less third party services	£m	3				67.483
20	Third party services - opex	£m	3				0.000
20a	PPP Unitary Charges (Opex element)	£m	3				
21	Total operating expenditure	£m	3				67.483
21a	Payment by concessionaire to operator	£m	3				
C	**OPEX)**						
22	Reactive and planned maintenance infrastructure	£m	3	2 512	0.000	0 000	2.512
23	Reactive and planned maintenance non-infrastructure	£m	3	7 836	2.569	0 000	10.406
D	**CAPITAL MAINTENANCE**						
24	Infrastructure renewals charge (excluding third party services)	£m	3	14.755		0 000	14.755
25	Current cost depreciation (allocated)	£m	3	2.451	61.549	1 540	65.540
26	Amortisation of deferred credits	£m	3				-2.536
27	Amortisation of intangible assets	£m	3				0.000
28	Business activities current cost depreciation (non-allocated)	£m	3				0.000
29	Capital maintenance excluding third party services	£m	3				77.759
30	Third party services - current cost depreciation	£m	3				0.000
31	Third party services - infrastructure renewals charge	£m	3				0.000
32	Total capital maintenance	£m	3				77.759
33	Total operating costs	£m	3				145.242

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 22 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - SEWERAGE SERVICE (PPP Only)

	DESCRIPTION	UNITS	DP	1 SEWERAGE	2 SEWAGE TREATMENT	3 SLUDGE TREATMENT & DISPOSAL	4 SEWERAGE SERVICE TOTAL
	SERVICE ANALYSIS - SEWERAGE						
A	DIRECT COSTS						
1	Employment costs	£m	3				
2	Power	£m	3	0 000	1.795	1 215	3.010
3	Agencies	£m	3				
4	Hired and contracted services	£m	3				
5	Associated companies	£m	3				
6	Materials and consumables	£m	3				
7	Service charges	£m	3				
8	Other direct costs	£m	3	0 000	0.000	0 000	0.000
9	Total direct costs	£m	3	0 000	1.795	1 215	3.010
10	General and support expenditure (NIW Only)	£m	3	0 000	0.205	0 069	0.274
11	Functional expenditure	£m	3	0 000	2.000	1 284	3.284
B	OPERATING EXPENDITURE						
12	Customer services	£m	3				
13	Scientific services	£m	3				0.101
14	Other business activities	£m	3				
15	Total business activities	£m	3				0.075
16	Rates	£m	3				1.082
17	Doubtful debts	£m	3				
18	Exceptional items	£m	3				
19	Total opex less third party services	£m	3				4.467
20	Third party services - opex	£m	3				
20a	PPP Unitary Charges (Opex element)	£m	3				[redacted]
21	Total operating expenditure	£m	3				[redacted]
21a	Payment by concessionaire to operator	£m	3	[redacted]	[redacted]	[redacted]	[redacted]
C	OPEX)						
22	Reactive and planned maintenance infrastructure	£m	3				
23	Reactive and planned maintenance non-infrastructure	£m	3				
D	CAPITAL MAINTENANCE						
24	Infrastructure renewals charge (excluding third party services)	£m	3	0 000		0 000	0.000
25	Current cost depreciation (allocated)	£m	3	0 000	0.000	0 000	0.000
26	Amortisation of deferred credits	£m	3				0.000
27	Amortisation of intangible assets	£m	3				0.000
28	Business activities current cost depreciation (non-allocated)	£m	3				0.000
29	Capital maintenance excluding third party services	£m	3				0.000
30	Third party services - current cost depreciation	£m	3				0.000
31	Third party services - infrastructure renewals charge	£m	3				0.000
32	Total capital maintenance	£m	3				0.000
33	Total operating costs	£m	3				[redacted]

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 22 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
ACTIVITY COSTING ANALYSIS - SEWERAGE SERVICE (Total)

	DESCRIPTION	UNITS	DP	1 SEWERAGE	2 SEWAGE TREATMENT	3 SLUDGE TREATMENT & DISPOSAL	4 SEWERAGE SERVICE TOTAL
	SERVICE ANALYSIS - SEWERAGE						
A	DIRECT COSTS						
1	Employment costs	£m	3	3.930	4.724	0.294	8.948
2	Power	£m	3	3.952	9 676	1.088	14.716
3	Agencies	£m	3	0.000	0 000	0.000	0.000
4	Hired and contracted services	£m	3	4.300	2 514	1.912	8.726
5	Associated companies	£m	3	0.000	0 000	0.000	0.000
6	Materials and consumables	£m	3	0.222	0.460	0.499	1.181
7	Service charges	£m	3	0.132	0.468	0.189	0.789
8	Other direct costs	£m	3	0.007	0 016	0.000	0.023
9	Total direct costs	£m	3	12.543	17 858	3.982	34 383
10	General and support expenditure	£m	3	7.518	12.407	1.700	21 625
11	Functional expenditure	£m	3	20.061	30 265	5.682	56 008
B	OPERATING EXPENDITURE						
12	Customer services	£m	3				4.188
13	Scientific services	£m	3				1.280
14	Other business activities	£m	3				0.501
15	Total business activities	£m	3				5.969
16	Rates	£m	3				9.748
17	Doubtful debts	£m	3				0.225
18	Exceptional items	£m	3				0.000
19	Total opex less third party services	£m	3				71 950
20	Third party services - opex	£m	3				0.000
20a	PPP Unitary Charges (Opex element)	£m	3				[redacted]
21	Total operating expenditure	£m	3				[redacted]
21a	Payment by concessionaire to operator	£m	3	[redacted]	[redacted]	[redacted]	[redacted]
C	OPEX)						
22	Reactive and planned maintenance infrastructure	£m	3	2.512	0 000	0.000	2.512
23	Reactive and planned maintenance non-infrastructure	£m	3	7.836	2 569	0.000	10.406
D	CAPITAL MAINTENANCE						
24	Infrastructure renewals charge (excluding third party services)	£m	3	14.755		0.000	14.755
25	Current cost depreciation (allocated)	£m	3	2.451	61 549	1.540	65 540
26	Amortisation of deferred credits	£m	3				-2.536
27	Amortisation of intangible assets	£m	3				0.000
28	Business activities current cost depreciation (non-allocated)	£m	3				0.000
29	Capital maintenance excluding third party services	£m	3				77.759
30	Third party services - current cost depreciation	£m	3				0.000
31	Third party services - infrastructure renewals charge	£m	3				0.000
32	Total capital maintenance	£m	3				77.759
33	Total operating costs	£m	3				[redacted]

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 23 REGULATORY ACCOUNTS
ANALYSIS OF TURNOVER AND OPERATING INCOME

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	CG	18	19	20	21	22	23	24	25	26	27	28	29
				2012-13			2013-14			2014-15			2015-16			2016-17						2017-18			2018-19			2019-20			2020-21		
				WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	SUBSIDY WATER INCLUDED	SUBSIDY SEWERAGE INCLUDED		WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS	WATER SERVICES	SEWERAGE SERVICES	APPOINTED BUSINESS
A	**TURNOVER**																																
1	Unmeasured - household	£m	3	121.195	143.905	265.100	122.139	138.161	260.300	126.574	135.825	262.399	125.277	138.923	264.200	123.828	141.172	265.000	123.828	141.172	A2												
2	Unmeasured - non- household	£m	3	2.211	2.766	4.977	2.049	2.545	4.594	1.762	2.102	3.864	1.829	2.125	3.954	2.041	2.401	4.442	0.922	1.078	A2												
3	Unmeasured	£m	3	123.406	146.671	270.077	124.188	140.706	264.894	128.336	137.927	266.263	127.106	141.048	268.154	125.869	143.573	269.442	124.750	142.250	A2												
4	Measured - household	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	A2												
5	Measured - non- household	£m	3	38.751	22.144	60.895	38.465	24.148	62.613	39.872	26.168	66.040	39.955	24.739	64.694	41.096	27.518	68.614	9.127	5.615	A2												
6	Measured	£m	3	38.751	22.144	60.895	38.465	24.148	62.613	39.872	26.168	66.040	39.955	24.739	64.694	41.096	27.518	68.614	9.127	5.615	A2												
7	Trade effluent	£m	3		4.326	4.326		3.889	3.889		3.561	3.561		4.557	4.557		4.278	4.278	0.000	0.000	A2												
7a	Roads Drainage Revenue	£m	3	0.000	20.911	20.911		20.049	20.049		19.154	19.154		20.030	20.030		20.596	20.596	0.000	0.000	A2												
8	Large user and special agreement	£m	3	5.354	4.290	9.644	5.243	4.041	9.284	5.136	3.711	8.847	4.980	4.286	9.266	4.980	4.105	9.085	0.000	0.000	A2												
9	Revenue grants	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	A2												
10	Non potable water large user and special agreements	£m	3	0.000		0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	0.000	0.000	A2												
11	Rechargeable works	£m	3	0.093	0.093	0.186	0.092	0.092	0.184	0.056	0.056	0.112	0.065	0.065	0.130	0.064	0.064	0.128	0.000	0.000	A2												
12	Bulk supplies/inter company payments	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	A2												
13	Other appointed business (third party)	£m	3	0.172	0.187	0.359	0.162	0.238	0.400	0.191	0.239	0.430	0.196	0.260	0.456	0.368	0.343	0.711	0.000	0.000	A2												
14	Third party services (excluding non-potable water)	£m	3	0.265	0.280	0.545	0.254	0.330	0.584	0.247	0.295	0.542	0.261	0.325	0.586	0.432	0.407	0.839	0.000	0.000	A2												
15	Other sources (excluding large users, third parties and special agreements	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	A2												
16	Total turnover	£m	3	167.776	198.622	366.398	168.150	193.163	361.313	173.591	190.816	364.407	172.302	194.985	367.287	172.377	200.477	372.854	133.877	147.865	A2												
B	**OPERATING INCOME**																																
17	Current cost profit or loss on sale of fixed assets	£m	3	-0.133	-0.170	-0.303	0.208	0.000	0.208	0.255	0.233	0.488	-0.083	0.174	0.091	0.523	-0.034	0.489			A2												
18	Exceptional items	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			A2												
19	Other operating income	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			A2												
20	Total operating income	£m	3	-0.133	-0.170	-0.303	0.208	0.000	0.208	0.255	0.233	0.488	-0.083	0.174	0.091	0.523	-0.034	0.489			A2												
C	**WORKING CAPITAL ADJUSTMENT**																																
21	Working capital adjustment	£m	3	2.641	0.000	2.641	2.001	0.000	2.001	0.840	0.000	0.840	1.516	0.000	1.516	3.032	0.000	3.032			A2												
D	**REVENUE CORRECTION MECHANISM**																																
22	Net revenue movement out of the tariff basket	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	A2												

Table 23 – Analysis of turnover and operating income

Working Capital Adjustment

The commentary to Table 27 outlines the methodology for the Working Capital Adjustment.

Monthly Non-domestic Income Monitoring Process

The process for monitoring income is laid out in the flow diagram in Appendix A.

By 3.00pm on the third working day (Day 3) of each month, NI Water's billing partner, Echo Managed Services Ltd (Echo), e-mails to NI Water a spreadsheet that includes details of summary billed income, accrued income, cash, bad debt write-off and debtor information, as well as the general ledger postings for the month. In addition, the following reports are provided at that time:

- Bank reconciliation;
- Aged debt analysis;
- Listing of all refunds;
- Listing of all transactions;
- Accrued income details;
- Cash received listing;
- List of returned payments.

Billed income comes in the form of both invoices (first time round billing, arising from a meter reading or an estimate) and system adjustments (adjustments made to a previously invoiced bill). The transaction listing, mentioned above, is reviewed by both Finance & Regulation (F&R) and Billing & Revenue (B&R) to analyse the system adjustments made in the month and to understand better any budget/forecast variances in the month.

During Day 4, NI Water performs the general ledger posting on to Oracle and then assesses and posts the following:

- The amount of income on "N-stop" i.e. invoices held back for a variety of reasons, to be recognised in the accounts;
- Any adjustments to the accrued income (see Appendix H); and
- The amount of provision to be made against the accrued income (based on those items of accrued income greater than 210 days old).

A draft income summary is prepared showing income to date across the five income categories (measured water, measured sewerage, unmeasured water, unmeasured sewerage and trade effluent) for both the month and the year to date, together with comparative figures for the budget and the latest forecast. An initial meeting between F&R and B&R is held on the afternoon of Day 4 to ascertain high-level reasons for any budget/forecast variances in the month.

A written report is then prepared by the F&R Business Partner on the income and debt performance (including commentary on the level of provisions held), in advance of the Monthly Accounts meeting held with the Director of F&R (which normally occurs around on the morning of working day 5 in the month).

On Day 5, Echo finalises the Day 5 data, and is saved on to an NI Water Public drive. This contains a number of detailed spreadsheets, such as VAT reports and suspense account (see Appendix B).

On Day 8, the final income meeting is held between F&R and B&R, at which the variance analysis is discussed in greater depth. The final income summary is then sent out to all relevant staff, including the Director of F&R and the Director of Customer Services Delivery (CSD).

A short commentary on the total NI Water income for the month is prepared for the Board to be included in the monthly Finance Report (though this may be completed in advance of the Day 8 meeting, depending on the date of the Board Meeting in the month).

NI Water also analyses billed income each month by volume and consumption, in what is termed the "Actuals Report". A monthly meeting between F&R and B&R is held to review this, though always some time after the Day 8 meeting.

Movements in Income against PC15

Following on from the monitoring process detailed above, the 2016/17 year-end position of income against PC15 submission was as follows:

Income	Actual Income 2016/17 £m	PC15 Income 2016/17 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	123.8	127.1	(3.3)
Domestic phasing subsidy - sewerage	141.2	145.8	(4.6)
Non-domestic phasing subsidy - water	0.9	1.0	(0.1)
Non-domestic phasing subsidy - sewerage	1.1	1.2	(0.1)
Domestic allowance - water	9.2	8.3	0.9
Domestic allowance - sewerage	5.6	4.4	1.2
Septic tank subsidy	2.6	0.0	2.6
Total subsidy	284.4	287.8	(3.4)
Non-domestic income:			
Measured water	36.9	36.3	0.6
Measured sewerage	23.2	22.5	0.7
Unmeasured water	1.1	1.0	0.1
Unmeasured sewerage	1.4	1.2	0.2
Trade effluent	7.1	6.6	0.5
Total non domestic income	69.7	67.6	2.1
Road drainage income	20.6	21.3	(0.7)
Other regulated income	0.9	0.7	0.2
Other non-regulated income	3.2	0.0	3.2
TOTAL INCOME	**378.8**	**377.4**	**1.4**

The above table includes both appointed and un-appointed income.

Specific reasons for the £1.4m increase over PC15 are:

- The domestic phasing subsidy represents a measured water tariff of £1.067 per m^3 used at the time of PC15 for 2016/17, as opposed to the actual tariff of £1.03; with measured sewerage, the PC15 tariff was £1.7425, against the actual of £1.666.
- Septic tank subsidy is not included within the PC15 submission.
- The domestic allowance subsidy reflects the rateable allowances being claimed by customers, which are refunded to NI Water. The PC15 figures represented the assumptions at the time; the actual figures reflect the fact that a new report was developed (after the PC15 submission) to capture domestic allowances which were not being picked from the previous report. There was around £1.0m of additional allowances picked up within this new report.
- With measured water:
    - There was a 3.5% reduction in the actual tariff, from what was used in the PC15 submission, equivalent to around £1.2m.
    - The PC15 submission assumed a water volume of 28.5 million m^3; actual consumption was more like 30.7 million m^3. This difference is due to the following:
        - Back billing from the Metering and Billing project has been around 0.2 million m^3.
        - 0.2 million m^3 of income from properties, previously designated as voids (and hence not being billed), was created.
        - 0.1million m^3 from new customers, such as [redacted]
        - There have been consumption increases of circa 0.3 million m^3 for some of the larger customers [redacted]
        - There was other back billing of approximately 0.2 million m^3.
- Measured sewerage:
    - There was a 4.4% reduction in the actual tariff, from what was used in the PC15 submission, equivalent to around £1.0m.
    - There was a release of £0.2m of over-provision against [redacted] (see contra with TE below).
    - In 2016/17, the £0.1m provision for [redacted] non-return to sewer (NRTS) allowance was released, with the reduction actually coming within TE.
    - The PC15 submission assumed a water volume of 10.7 million m^3; actual consumption was more like 11.5 million m^3. This difference is due to the following:
        - 0.4 million m^3 from the Retro Sewerage EPIC project.
        - 0.1 million m^3 of income from void properties was created.
        - 0.1 million m^3 from new customers, such as [redacted]
        - 0.1 million m^3 increase from [redacted] mostly for the borehole at the [redacted]
- For unmeasured income, there has been back billing of income, arising from the Metering & Billing and Voids projects, plus even some from the Retro Sewerage EPIC, leading to a large increase in the number of unmeasured customers. The total income for the year of £2.5m is actually close to the level seen in 2009/10, before the drive by NI Water to install meters in as many unmeasured customers as possible (see graph below). This indicates that NI Water is identifying customers who previously were not being billed for their water.

- For trade effluent income, there has been:
  - There was a reduction in the actual tariff, from what was used in the PC15 submission, equivalent to around £0.2m.
  - A £0.1m hit, from the re-calculation of the NRTS allowance for [redacted] (as mentioned in measured sewerage above).
  - There was a £0.2m reduction from the release of a provision for [redacted] (see contra with MS above).
  - A £0.2m reduction in income from [redacted], which ceased production during 2016/17.
  - £0.6m rise in consumption/strengths for various customers [redacted]
  - A £0.1m rise from the re-configuration of [redacted] account.
  - A £0.1m increase in income from new customers e.g. [redacted]
  - A £0.2m increase in income for [redacted] and [redacted], both of which had been back-billed in 2015/16, but not recognised fully in the 2016/17 budget.
- For Road Drainage, higher tariffs were used in the PC15 calculation.
- Other income in the PC15 submission only contains regulated income, and excludes income from the likes of vehicle maintenance, rental of aerial sites and sales of Renewable Obligation Certificates (ROCs). The £0.2m increase is due to increased income from development income, arising from an uplift in the building sector.

Movements in Income against budget

Following on from the monitoring process detailed above, the 2016/17 year-end position of income against budget was as follows:

Income	Actual Income 2016/17 £m	Budget Income 2016/17 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	123.8	123.8	0.0
Domestic phasing subsidy - sewerage	141.2	141.2	0.0
Non-domestic phasing subsidy - water	0.9	0.9	0.0
Non-domestic phasing subsidy - sewerage	1.1	1.1	0.0
Domestic allowance - water	9.2	9.8	(0.6)
Domestic allowance - sewerage	5.6	6.0	(0.4)
Septic tank subsidy	2.6	2.5	0.1
Total subsidy	284.4	285.3	(0.9)
Non-domestic income:			
Measured water	36.9	36.2	0.7
Measured sewerage	23.2	21.7	1.5
Unmeasured water	1.1	0.8	0.3
Unmeasured sewerage	1.4	1.0	0.4
Trade effluent	7.1	6.8	0.3
Total non domestic income	69.7	66.5	3.2
Road drainage income	20.6	20.6	0.0
Other	4.1	3.4	0.7
TOTAL INCOME	**378.8**	**375.8**	**3.0**

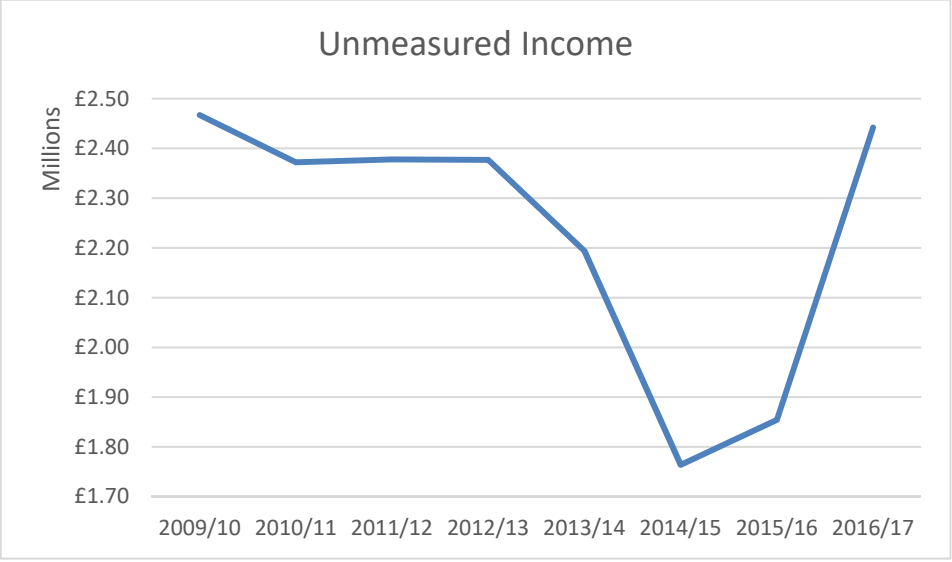
The above table includes both appointed and un-appointed income.

Specific reasons for the £3.0m increase over budget are:

- During 2016/17, the level of allowances arising from the Metering and Billing project was not as great as had been expected; hence the £1.0m overall variance against budget.
- With measured water:
  - Back billing from the Metering and Billing project has been around £0.5m less than the £0.7m budgeted.
  - In 2016/17, £0.2m of income from properties, previously designated as voids (and hence not being billed), was created.
  - In 2016/17, £0.1m from new customers, such as [redacted]

- There have been consumption increases of circa £0.5m for some of the larger customers [redacted]
- The budgeted reduction of £0.4m in [redacted] did not occur, and [redacted] overall consumption remained consistent with previous years.

- Measured sewerage:
  - There was a release of £0.2m of over-provision against [redacted] (see contra with TE below).
  - Income of £0.6m from the Retro Sewerage EPIC project.
  - In 2016/17, £0.2m of income from void properties was created.
  - In 2016/17, £0.2m from new customers, such as [redacted].
  - In 2016/17, the £0.1m provision for [redacted]s non-return to sewer (NRTS) allowance was released, with the reduction actually coming within TE.
  - In 2016/17, £0.1m increase from [redacted], mostly for the borehole at the [redacted].
- For unmeasured income, there has been back billing of income, arising from the Metering & Billing and Voids projects, plus even some from the Retro Sewerage EPIC, leading to a large increase in the number of unmeasured customers. The total income for the year of £2.5m is actually close to the level seen in 2009/10, before the drive by NI Water to install meters in as many unmeasured customers as possible (see graph below). This indicates that NI Water is identifying customers who previously were not being billed for their water.



- For trade effluent income, there has been:
  - A £0.4m rise in consumption/strengths for other customers [redacted]
  - A £0.1m rise from the re-configuration of [redacted] account.
  - A £0.1m increase in income from new customers [redacted]
  - A £0.2m increase in income for [redacted] and [redacted], both of which had been back-billed in 2015/16, but not recognised fully in the 2016/17 budget.
  - A £0.2m reduction in income from [redacted], which ceased production during 2016/17.

- A £0.1m hit, from the re-calculation of the NRTS allowance for [redacted] (as mentioned in measured sewerage above).
- There was a £0.2m reduction from the release of a provision for [redacted] (see contra with MS above).

Movements in Income between 2016/17 and 2015/16

The table below details the income for the year ended 31 March, for both 2017 and 2016:

Income	Actual Income 2016/17 £m	Actual Income 2015/16 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	123.8	125.3	(1.5)
Domestic phasing subsidy - sewerage	141.2	139.0	2.2
Non-domestic phasing subsidy - water	0.9	1.0	(0.1)
Non-domestic phasing subsidy - sewerage	1.1	1.1	0.0
Domestic allowance - water	9.2	8.9	0.3
Domestic allowance - sewerage	5.6	5.7	(0.1)
Septic tank subsidy	2.6	2.5	0.1
Total subsidy	284.4	283.5	0.9
Non-domestic income:			
Measured water	36.9	36.0	0.9
Measured sewerage	23.2	20.3	2.9
Unmeasured water	1.1	0.9	0.2
Unmeasured sewerage	1.4	1.0	0.4
Trade effluent	7.1	7.5	(0.4)
Total non domestic income	69.7	65.7	4.0
Road drainage income	20.6	20.0	0.6
Other	4.1	3.6	0.5
TOTAL INCOME	**378.8**	**372.8**	**6.0**

The above table includes both appointed and un-appointed income.

The income has increased by £6.0m, due to:

- An increase in the subsidy for domestic properties of £0.7m, which reflects the second year of the PC15 Final Determination.
- A £0.2m rise in the level of the rateable allowances being claimed by customers, following the introduction of a new report (see above).
- For measured water, there was no tariff increase. However,

  - Measured water had few back-billing incidents during 2015/16, though £0.2m occurred for [redacted] and [redacted]. Back billing in 2016/17 has also been around £0.2m, with amounts for [redacted] and [redacted]
  - In 2016/17, £0.2m of income from void properties was created.
  - In 2016/17, £0.1m from new customers, such as [redacted].
  - There have been consumption increases of circa £0.5m for some of the larger customers [redacted]
- For measured sewerage, there was no tariff increase against 2015/16 (2%). Again, as in the analysis against budget, the big movements against the previous year were:
  - In 2015/16, the net impact of the TE/Hospital Review exercise of (£1.5m); in 2016/17, there was a release of £0.2m of over-provision against [redacted] (see contra with TE below).
  - In 2016/17, £0.6m of income from the Retro Sewerage EPIC project.
  - In 2016/17, £0.2m of income from void properties was created.
  - In 2016/17, £0.2m from new customers, such as [redacted]
  - In 2016/17, the £0.1m provision for [redacted] non-return to sewer (NRTS) allowance was released, with the reduction actually coming within TE.
  - In 2016/17, £0.1m increase from [redacted], mostly for the borehole at the [redacted].
- For unmeasured income, there has been back billing of income, arising from the Metering & Billing and Voids projects, plus even some from the Retro Sewerage EPIC, leading to a large increase in the number of unmeasured customers.
- For trade effluent income, there has been:
  - An increase in production at the [redacted] at [redacted] and [redacted] leading to a £0.2m increase in revenue.
  - A £0.3m rise in consumption/strengths for other customers [redacted]
  - In 2016/17, a £0.1m increase in income from new customers [redacted]
  - In 2016/17, a £0.1m hit, from the re-calculation of the NRTS allowance for Norbrook (as mentioned in measured sewerage above).
  - In 2015/16, a £0.2m increase for [redacted] tied in with EPIC related to measured sewerage customers, which did not recur in 2016/17.

In 2015/16, TE income benefitting by £0.5m from the TE/Hospital; in 2016/17, there was a £0.2m reduction from the release of a provision for [redacted] (see contra with MS above).

Reconciliation of Billed Income to Income in the Accounts

The tables below detail, for both measured/unmeasured income and for trade effluent, how the income billed reconciles to the income reported at 31 March 2017:

Measured and unmeasured income	
	£m
Billed income	65.2
Movement in accrued income	(0.2)
2017/18 unmeasured billing deferred	(2.2)
Movement in referred bills	(0.3)
Norbrook NRTS allowance release	0.1
Hospital TE/TE review provisions release	0.6
Voids provision	(0.1)
Aldergrove, KWS, Ozone, RSE	(0.3)
Movement in future system adjustments provision	(0.1)
Rounding	(0.1)
Total income per accounts	62.6
Accrued income at 31 March 2017 represented 19% (2016: 22%) of annual billed income.	

Trade effluent	
	£m
Billed income	7.7
Movement in accrued income	0.1
Movement in Hospital TE/TE review provisions	(0.2)
Armaghdown Creameries provision	(0.5)
Total income per accounts	7.1
Accrued income at 31 March 2017 represented 11% (2016: 11%) of annual billed income.	

The two tables above show the total income per accounts prior to the classification in the accounts of elements of total income to large user revenue.

Of the adjustments detailed above, the following are “one-off” adjustments in 2016/17, and are not expected to recur:

- [redacted] NRTS allowance and Hospital/TE Review – this was reversed out in 2016/17, from what was put through in 2015/16.

The following adjustments may recur in future years:

- Movement in accrued income – there will always be a small variance over a period of a year.
- 2017/18 unmeasured billing deferred – the annual unmeasured billing will always be deferred, assuming that the invoicing is carried out in March.
- Movement in referred bills – there will always be a small variance over a period of a year.

- Voids provision, plus provisions for [redacted], Retro Sewerage EPIC and [redacted] – all likely to be reversed out during 2017/18.
- Movement in Future system adjustments provision – there will always be the need to provide for estimated future system adjustments.

Reconciliations and Controls carried out

A number of reconciliations are carried out on the income information sent by Echo:

- The Day 3 income information received from Echo is reconciled back to what has been entered on Oracle (see Appendix C). This reconciliation is signed off monthly by both Management Accounts (MA) and Financial Accounts (FA) within F&R.
- The debtor account in the balance sheet is reconciled each month, and signed off by MA and FA (see Appendix D).
- The accrued income account is reconciled each month by FA (see Appendix E).
- The number of meters to be billed is reconciled to what has actually been billed (see Appendix F).
- The invoices and system adjustments as per the Transaction Report are reconciled back to the GL posting within the Day 3 report (see Appendix G).
- The billed income for monthly customers and for the relevant six-monthly customers is compared to what was accrued in the previous month, on a meter by meter basis. The results from this are discussed at the Day 8 meeting.
- An income sheet, listing various checks on the Day 3 report, is adhered to (see Appendix J).

In addition, Echo carry out controls on meter readings, such that a bill is “held” and not sent out to the customer if its value has exceeded a certain level, known as the “bill ceiling”. The bill will then be investigated.

Review by Internal Audit

There were no internal audit reviews carried out in 2016/17 on income reporting.

Balance Sheet Nominal Ledger Accounts

The table below gives details of the relevant balance sheet accounts as at 31 March 2017, together with a comparison to the balances as at 31 March 2016.

	Balance 2016/17 £m	Balance 2015/16 £m	Variance £m
Debtors	10.4	9.9	0.5
Bad debt provision	(3.0)	(2.8)	(0.2)

Within the £0.5m rise in debtors there was:

- Back-billing of £0.5m for [redacted]

There was a slight increase in the bad debts provision, largely due to:

- The accounts for 2015/16 including a “year-end adjustment” of £0.1m, which reduced the bad debt provision at 31 March 2016.

Accrued Income

There are two reports which Echo uses for accrued income, both in the form of Excel spreadsheets included within the Day 3 data: the E039 Accrual Detail report (formerly called the Dynamic Consumption Report (DCR)), and a separate report for Trade Effluent, which is an excel spreadsheet model.

Measured customers are billed either every month (mainly larger customers) or every six months, in arrears, and income needs to be accrued for them for a period of up to six months. Therefore, there are seven "bill frequency" periods:

- Monthly
- Jan/Jul six monthly
- Feb/Aug six monthly
- Mar/Sep six monthly
- Apr/Oct six monthly
- May/Nov six monthly
- Jun/Dec six monthly

The E039 report takes information directly from the RAPID system, and is based on the latest reading date (as opposed to billing date) and the average consumption of previous bills. If estimated readings have been made, these are used in the calculation. If there is not the necessary information available, the report will use the industry average consumption (for the industry sector that the customer has been assigned to). Any system adjustments made to the original bill meter reading will automatically over-ride the original bill, and it will be system adjustment readings that are used for the calculation of the accrual.

Accruals for trade effluent income are based on an excel spreadsheet model built by Xansa. This takes billing data from 1 April of the previous year i.e. close to 2 years of data when March accrual is being calculated, and a year is shut down at the start of April each year. The model contains a price tariff percentage to either increase or decrease the accrual, depending on the % uplift/reduction in prices from the previous year. The other parameter, which has been built into the model, is that the report will not create an accrual, if either:

- A monthly customer has not been billed for 3 months; or
- A six monthly customer has not been billed for 500 days;

The model designates customers as monthly or six-monthly, but does not break six-monthly down into the relevant month in which the six monthly bills are issued.

A high-level reconciliation is performed by Echo each month, looking for any major differences in the month from the previous month.

Each month, the E039 report is reviewed by B&R for any unusual items, and an adjustment made for those. The adjustment made in March 2017 is shown in Appendix H.

The accrued income in the last two years has been:

	Accrued Income 2016/17 £m	Accrued Income 2015/16 £m	Variance £m
Accrued income:			
Measured water and sewerage	9.1	9.4	(0.3)
Trade effluent	0.4	0.8	(0.4)
TOTAL ACCRUED INCOME	**9.5**	**10.2**	**(0.7)**

The drop of £0.7m against the previous year can be explained as follows:

- There was a £0.1m uplift in the provision for future system adjustments.
- For trade effluent, there is £0.5m provided for against [redacted] where there is a dispute over who is liable, following the purchase of the site by [redacted]

Subsidy Income

In 2016/17, NI Water had total subsidy income of £284.4m. This was broken down as follows:

- £265.0m for domestic phasing subsidy for water and sewerage, in lieu of domestic charges.
- £2.0m for non-domestic phasing subsidy, representing 50% of unmeasured non-domestic income.
- £14.8m for domestic allowance subsidy, representing the domestic allowance claimed by customers for both water and sewerage (restricted to 200m^3 of water per year, for each building on which the customer pays business rates.).
- £2.6m for septic tank subsidy. NI Water receives subsidy income for all septic tanks, which it empties, except for those customers who receive a charge if they have more than one empty in a 12 month period.

Road Drainage Income

The road drainage charge for 2016/17 was based on the projections of NI Water's costs of operation (see the table below). The basis for the calculation has been approved by both the Regulator and by the Department for Infrastructure (DfI). A total of £20.6m was invoiced in 2016/17 to DfI, compared to £20.0m in 2015/16. A more detailed breakdown of the assumptions behind the calculation is provided in Appendix I.

	Combined	Storm Water	Total
Split of sewers for run off from roads and footpaths	50.35%	49.65%	100%
Total volume of Water (cubic metres)	32,325,198	31,874,802	64,200,000
Mogden Formula element	R+V	R	
Cost of Element	£0.4353 / m^3	£0.2046 / m^3	
Cost of Run off	£14,071,159	£6,521,584	£20,592,743

Non-tariff Basket Income

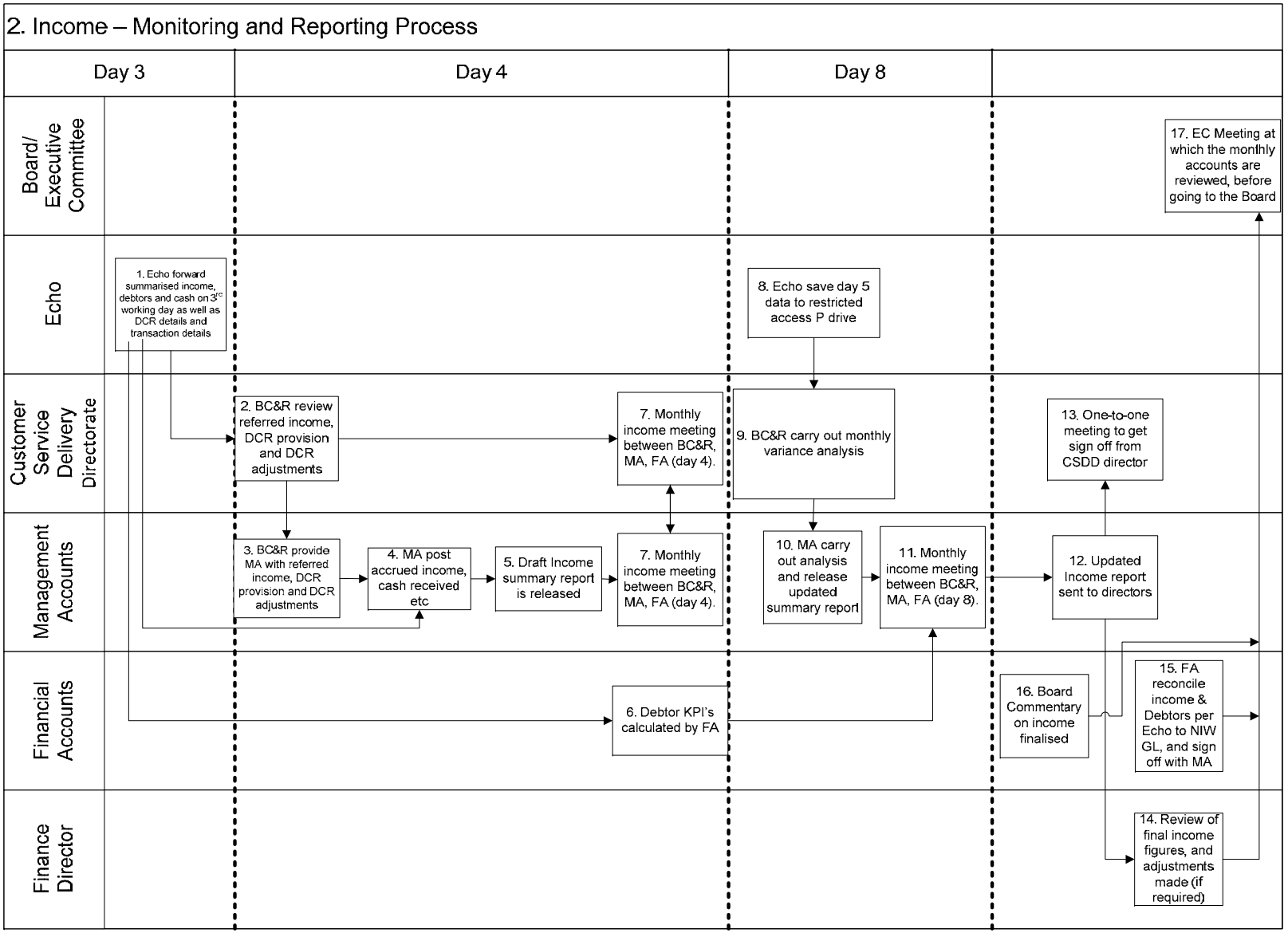
There is no net income movement out of the tariff basket for either water or sewerage.

Other Income

Other income was £4.1m for the 2016/17 year, against a budget of £3.4m, largely as a result of a rise (£0.2m) in vehicle maintenance income from [redacted] and of an increase (£0.3m) in income from Developer Services, from the uplift in the building sector across Northern Ireland.

The increase in sundry income from the 2015/16 figure is also largely due to these two factors.

Appendix A - Monthly Process for Monitoring Income



Appendix B – Day 3 & Day 5 Data received from Echo

Along with the actual summary Day 3 report, Echo also send:

- Bank reconciliation as at the end of the month;
- Aged debt reports as at the end of the month, by SIC code, industry code, etc.;
- An accrued income report, by meter reference, as at the end of the month.
- List of all income-related transactions in the month;
- List of refunds for the month;
- List of returned payments for the month;
- List of all cash payments, aged, for the month; and
- List of accounts on “n-stop”, as at the end of the month.

On Day 5, Echo send:

- VAT reports for the month;
- Consumption reports; and
- List of cash received transactions in the suspense account, as at the end of the month.

Appendix C – Reconciliation of Echo Day 3 Information at 31 March 2017

		YTD income 1st Apr to end of Previous Month	31-Mar-17 from Echo Disc	Accrued Income Reverse Previous	Accrued Income For this month	Referred Income Reverse Previous	Referred Income For this month	Deferred Income Reverse Previous	Deferred Income For this month	Monthly Movement	Closing Balance	GL01 report	Diff
			Dr/(Cr)	Dr/(Cr)	Dr/(Cr)	Dr/(Cr)	Dr/(Cr)						
4211	Measured Water	33,889,255	3,515,926	(7,775,330)	7,589,756	114,861	(180,672)			3,264,541	37,153,796	36,946,515	(207,281)
4311	Measured Sewerage	21,509,620	2,238,227	(5,440,057)	5,351,630	105,970	(177,842)			2,077,927	23,587,547	23,229,030	(358,517)
4251	Unmeasured Water	1,006,048	1,047,129					84,563	(1,028,463)	103,229	1,109,277	1,119,277	10,000
4351	Unmeasured Sewerage	1,190,431	1,220,062					100,197	(1,198,252)	122,007	1,312,438	1,322,437	9,999
4411	Trade Effluent	6,618,758	435,633	(699,647)	877,469	0				613,455	7,232,213	7,054,617	(177,596)
		64,214,112	8,456,976	15,735,146	13,818,855	220,831	(358,515)	184,759	(2,226,715)	6,181,159	70,395,271	69,671,876	(723,395)

		DIFFERENCES DCR provision movement reversal	DIFFERENCES DCR movement provision	DIFFERENCES Adj in accrued income reversal	DIFFERENCES Adj in accrued income	Industry average adj reversal	Industry average adj	Income prov reversal	Income prov adj	Prov against MS customers reversal	Prov against MS customers	Back-billing provision reversal	Back-billing provision	M&B provision reversal	M&B provision	Backbilling (formerly bad debt) reversal	Backbilling (formerly bad debt)	Increase to Mar 15 level reversal	Increase to Mar 15 level
		536,828	-536,828																
4211	Measured Water	(145,670)	150,188	23,175	(204,974)	63,000	(63,000)	55,000	(55,000)			225,000	(225,000)	125,000	(135,000)	150,000	(150,000)	60,000	(60,000)
4311	Measured Sewerage	(101,449)	104,595	56,035	(265,699)			25,000	(25,000)	50,000	(50,000)	200,000	(200,000)	125,000	(155,000)	100,000	(100,000)		
4251	Unmeasured Water													40,000	(30,000)				
4351	Unmeasured Sewerage													30,000	(20,000)				
4411	Trade Effluent	(13,006)	13,410									25,000	(25,000)						
		276,703	(268,635)	79,210	(470,673)	63,000	(63,000)	80,000	(80,000)	50,000	(50,000)	450,000	(450,000)	320,000	(340,000)	250,000	(250,000)	60,000	(60,000)

		[redacted]	[redacted] reversal	Jul 16 provision reversed	Jul 16 provision	RSE provision reversed	RSE provision	Additional back-billing provision reversed	Additional back-billing provision	Void provision reversed	Void provision	Provision for [redacted] reversed	Provision for [redacted]	Dec 16 provision reversed	Dec 16 provision [redacted]	[redacted] provision	[redacted] provision	Diff
4211	Measured Water			100,000	(100,000)			50,000	(50,000)	55,000	(70,000)	55,000		5,000		(60,000)	(5,000)	(0)
4311	Measured Sewerage					98,000	(50,000)	50,000	(50,000)	45,000	(55,000)	65,000	(120,000)	20,000	(25,000)	(90,000)	(10,000)	0
4251	Unmeasured Water																	0
4351	Unmeasured Sewerage																	(1)
4411	Trade Effluent	(488,000)	250,000											60,000				0
		(488,000)	250,000	100,000	(100,000)	98,000	(50,000)	100,000	(100,000)	100,000	(125,000)	120,000	(120,000)	85,000	(25,000)	(150,000)	(15,000)	(0)

Appendix D – Reconciliation of Debtors account on Oracle

NORTHERN IRELAND WATER LIMITED AS AT 31 MARCH 2017	
Summary of Debtors	
Water & Sewerage Debtors GL code 1210	**Mar-17**
Opening Balance	**£8,795,056.45**
Take on Bills/New Bills- TOTAL	**£7,077,173.53**
Take on Bills/New Bills- Sewerage	1,861,145.99
Take on Bills/New Bills- Water	2,745,448.59
Take on Bills/New Bills- VAT	173,268.50
Annual Billing	2,226,715.67
Annual Billing - VAT	70,594.78
Discounts	0.00
System Adjustments- Total	**£1,302,490.92**
System Adjustments- Sewerage	420,866.23
System Adjustments- Water	798,439.36
System Adjustments- VAT	83,185.33
Manual Adjustments- Total	**-£32,001.85**
Manual Adjustments- Sewerage	(21,009.57)
Manual Adjustments- Water	(10,363.94)
Manual Adjustments- VAT	(628.34)
Write Off Adjustments Total	**£117.11**
Write Off Adjustments- Sewerage	**0.00**
Write Off Adjustments- Water	**117.11**
Write Off Adjustments- VAT	**0.00**
NIWS Bad Debt Authorised Write Off- Total	**-£52,479.96**
NIWS Authorised Write Off- Sewerage	(25,270.95)
NIWS Authorised Write Off- Water	(25,395.10)
NIWS Authorised Write Off- VAT	(1,813.91)
Net Cash	**(5,843,504.53)**
Refunds	174,362.03
Water & Sewerage GL code 1210 Closing Balance	**£11,421,213.70**
Check	
Metered & Unmetered Water & Sewerage Debtors	**£11,421,213.70**
(As per Echo)	
Per Tb GL code 1210	**8,863,153.05**
Variance	**£2,558,060.65**
Due to:	
Variance (Oct = w/off Income 0708 in Oct08)	
Referred Bills **NOT** Recognised NET	(358,516.46)
Write-off of mixed supply debt > 3 years	(509,246.00)
System Adjustment Reduction	(1,550,000.00)
Various MS Adjustments	(140,000.00)
Unknown	(298.19)
Trade Effluent Debtors GL code 1213	
Opening Balance	**£1,848,255.33**
Take on Bills/New Bills	443,257.71
Referred Bills	
Annual Billing	
System Adjustments	**-£7,625.04**
Manual Adjustments	**£0.00**
Write Off Adjustments	
NIWS Authorised Bad Debt Write Off	**£0.00**
Net Cash	**-£744,915.79**
Refunds	**£0.00**
Trade Effluent GL code 1213 Closing Balance	**£1,538,972.21**
Variance	**-£1.64**
Per Trial Balance general ledger code 1213	**1,538,974**
Due to:	
Trade Effluent	
Referred Bills	
Total Opening Balance GL code 1213 & 1210	**£10,643,311.78**
Take on Bills/New Bills	**£5,293,715.57**
Annual Billing	**£2,226,715.67**
Discounts	**£0.00**
System Adjustments	**£1,294,865.88**
Manual Adjustments	**-£32,001.85**
Write Off Adjustments	**£117.11**
NIWS Authorised Bad Debt Write Off	**-£52,479.96**
Net Cash	**-£6,588,420.32**
Refunds	**£174,362.03**
Total Closing Balance GL code 1213 & 1210	**£12,960,185.91**
Balance as per FN012 Summary	£12,959,716.32
Difference	£469.59
Echo Debtor Ledger	£12,919,945.18
Balance as per FN012 Summary	£12,959,716.32
Suspense Ac FN012 Summary	£39,285.51
Difference	-£79,056.65
Prepared By	[redacted]
Date	
Reviewed By	
Date	[redacted]

Appendix E – Reconciliation of Accrued Income Account

NIW Accrued Income	
	Mar-17
Per Echo	
Measured Water	7,590
MW Accrued Income Adj	
Measured Sewerage	5,352
Trade Effluent	877
Accrued income	**13,819**
Accrued income adjustments	
DCR Provision	-269
DCR Further	-500
Accrued Income provision	-471
Increase in provision	-110
Industry average adj	-63
Income prov adj	-80
Future System Adjustments	-620
BackBilled Income Provision	-950
Jul 16 provision	-100
TE Review	0
Hospital TE	0
[redacted] NRTS	0
[redacted] Adj	0
Retro Sewerage EPIC Provision	-50
M&B Provision	-170
[redacted] i additional accruals	
[redacted]	-488
Accrued TE Provision	0
Tesco provision	0
Void back-billing	-125
[redacted] provision	-25
[redacted] provision	0
[redacted]	-15
[redacted]	-150
[redacted] Provision	-120
Accrued income posted	9,513
Per TB (1420/1423)	9,513
Difference	0

Appendix F – Reconciliation of Meters

2016/17 - Meter Reconciliation Analysis

Meters to be read	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Estimated	215	359	367	179	212	263	869	666	188	115	211	202
No Read	849	876	600	539	666	684	751	798	534	506	611	655
Read	12,633	13,786	9,415	9,809	11,297	13,436	12,027	13,515	9,619	9,884	11,316	13,502
Total Meters	13,697	15,021	10,382	10,527	12,175	14,383	13,647	14,979	10,341	10,505	12,138	14,359
No Reads to be investigated - Code Red	32	16	14	10	4	14	11	19	14	20	10	18

Meters to be billed	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Billable Meters	12,873	14,146	9,790	9,986	11,508	13,699	12,892	14,181	9,816	10,001	11,523	13,702
Non-Billable Meters	824	875	592	541	667	684	755	798	525	504	615	657
Total Meters	13,697	15,021	10,382	10,527	12,175	14,383	13,647	14,979	10,341	10,505	12,138	14,359
Total Meters Billed	12,734	14,015	9,684	9,868	11,385	13,588	12,774	14,042	9,714	9,868	11,396	13,582
Meters to be investigated	139	131	106	118	123	111	118	139	102	133	127	120
Billable Meters	12,873	14,146	9,790	9,986	11,508	13,699	12,892	14,181	9,816	10,001	11,523	13,702
Meters to be investigated - Code Red	44	13	16	12	18	15	21	17	11	27	19	21

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Estimated reads as % of Total Meters to be read	2%	2%	4%	2%	2%	2%	6%	4%	2%	1%	2%	1%
No Reads as a % of Total Meters to be read	6%	6%	6%	5%	5%	5%	6%	5%	5%	5%	5%	5%
Read Meters as % of Total Meters to be read	92%	92%	91%	93%	93%	93%	88%	90%	93%	94%	93%	94%
Total Meters	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Code Red as % of Meters to be investigated	4%	2%	2%	2%	1%	2%	1%	2%	3%	4%	2%	3%
Estimated % (Excl 'No Reads')	2%	3%	4%	2%	2%	2%	7%	5%	2%	1%	2%	1%

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Billable Meters as % of Total Meter Records	94%	94%	94%	95%	95%	95%	94%	95%	95%	95%	95%	95%
Non - Billable Meters as % of Total Meter Records	6%	6%	6%	5%	5%	5%	6%	5%	5%	5%	5%	5%
Total Meters	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Meters Billed as a % of Billable Meters	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Meters to be investigated as a % of Billable Meters	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Billable Meters	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Code Red as % of Meters to be investigated	32%	10%	15%	10%	15%	14%	18%	12%	11%	20%	15%	18%

Appendix G – Reconciliation of invoices and system adjustments as at 31 March 2017

	Trans Rpt	GL Posting	Variance
Measured Water	3,515,926	3,515,926	(0.00)
Measured Sewerage	2,238,227	2,238,227	0.00
Unmeasured Water	1,047,129	1,047,129	(0.00)
Unmeasured Sewerage	1,220,062	1,220,062	(0.00)
TE	435,633	435,633	0.00
Sub-total	8,456,976	8,456,976	(0)
Discount	16	16	0.00
VAT	326,420	326,420	(0.00)
TOTAL	**8,783,412**	**8,783,412**	**(0)**

Appendix H – Accrued Income Adjustments at 31 March 2017

	Customer	Meter F	Customer / Company Name	Industry	Pipe Si	Read F	Accrual	Read H	Water vi	Water vo	Sewerag	Sewerag	Water S	Water Vo	Total Water	Sewerag	Sewerag	Total Sew	Total ac	Total accru	Total Accru
Per DCR	9259165	735843	[redacted]	Food Man	20mm/.75	Six Month	106	IND AVE	3,316	31	3,150	31	£19	£3,356	£3,375	£22	£5,156	£5,179	£41	£8,512	£8,553
Correction	9259165	735843		Food Man	20mm/.75	Six Month	106	IND AVE	106	1	101	1	£19	£107	£126	£22	£165	£187	£41	£272	£313
														Variance	(£3,248)		Variance	(£4,991)		Variance	(£8,240)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	31044	1357239	[redacted]	Food Man	25mm/1.0	Six Month	90	IND AVE	2,816	31	2,675	31	£27	£2,900	£2,928	£32	£4,457	£4,488	£59	£7,357	£7,416
Correction	31044	1357239		Food Man	25mm/1.0	Six Month	90	IND AVE	180	2	171	2	£27	£185	£213	£32	£285	£316	£59	£470	£529
														Variance	(£2,715)		Variance	(£4,172)		Variance	(£6,887)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	8547997	1123094	[redacted]	Food Man	20mm/.75	Six Month	185	IND AVE	5,788	31	5,499	31	£33	£5,962	£5,995	£39	£9,161	£9,200	£72	£15,123	£15,195
Correction	8547997	1123094		Food Man	20mm/.75	Six Month	185	IND AVE	185	1	176	1	£33	£191	£224	£39	£293	£332	£72	£483	£555
														Variance	(£5,771)		Variance	(£8,869)		Variance	(£14,640)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	60004	327482	[redacted]	Law & Orc	20mm/.75	Six Month	124	READING	9,291	75	8,826	75	£22	£9,523	£9,545	£26	£13,794	£13,821	£48	£23,318	£23,366
Correction	60004	327482		Law & Orc	20mm/.75	Six Month	124	READING	124	1	118	1	£22	£127	£149	£26	£184	£210	£48	£311	£359
														Variance	(£9,396)		Variance	(£13,610)		Variance	(£23,007)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	9265269	654801	[redacted]	Play Grou	20mm/.75	Six Month	127	READING	10,160	80	9,652	80	£23	£10,465	£10,487	£27	£16,080	£16,107	£49	£26,545	£26,594
Correction	9265269	654801		Play Grou	20mm/.75	Six Month	127	READING	127	1	121	1	£23	£131	£153	£27	£201	£228	£49	£332	£381
														Variance	(£10,334)		Variance	(£15,879)		Variance	(£26,213)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	6982027	521809	[redacted]	Farms Dor	20mm/.75	Six Month	178	READING	5,670	32	0	32	£32	£5,753	£5,784	£0	£0	£0	£32	£5,753	£5,784
Correction	6982027	521809		Farms Dor	20mm/.75	Six Month	178	READING	178	1	0	1	£32	£181	£212	£0	£0	£0	£32	£181	£212
														Variance	(£5,572)		Variance	£0		Variance	(£5,572)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	9237689	412212	[redacted]	General M	100mm/4.(	Six Month	19	READING	1,583	83	1,504	83	£59	£1,202	£1,261	£68	£1,846	£1,914	£128	£3,048	£3,176
Correction	9237689	412212		General M	100mm/4.(	Six Month	19	READING	380	20	361	20	£59	£289	£348	£68	£443	£511	£128	£732	£859
														Variance	(£913)		Variance	(£1,403)		Variance	(£2,316)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	88639	574454	[redacted]	Filling Stat	20mm/.75	Six Month	151	READING	4,047	27	3,845	27	£27	£3,930	£3,957	£32	£5,608	£5,640	£59	£9,538	£9,597
Correction	88639	574454		Filling Stat	20mm/.75	Six Month	151	READING	755	5	717	5	£27	£338	£365	£32	£1,046	£1,078	£59	£1,778	£1,838
														Variance	(£3,197)		Variance	(£4,562)		Variance	(£7,759)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	7801393	389324	[redacted]	Farms Dor	15mm/.50	Six Month	51	READING	1,787	35	0	35	£9	£1,812	£1,821	£0	£0	£0	£9	£1,812	£1,821
Correction	7801393	389324		Farms Dor	15mm/.50	Six Month	51	READING	765	15	0	15	£9	£776	£785	£0	£0	£0	£9	£776	£785
														Variance	(£1,036)		Variance	£0		Variance	(£1,036)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	2449125	344954	[redacted]	Farms Dor	20mm/.75	Six Month	177	READING	10,137	57	0	57	£32	£10,274	£10,306	£0	£0	£0	£32	£10,274	£10,306
Correction	2449126	344954		Farms Dor	20mm/.75	Six Month	177	READING	177	1	0	1	£32	£179	£211	£0	£0	£0	£32	£179	£211
														Variance	(£10,095)		Variance	£0		Variance	(£10,095)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	394852	672476	[redacted]	General M	>225mm/9	Monthly	0	IND AVE	0	9	0	9	£0	£0	£0	£0	£0	£0	£0	£0	£0
Correction	394852	672476		General M	>225mm/9	Monthly	0	IND AVE	0	3,192	0	3,192	£0	£0	£0	£0	£0	£0	£0	£0	£0
														Variance	£0		Variance	£0		Variance	£0
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	4412011	1346432	[redacted]	Water and	100mm/4.(	Monthly	31	READING	6,999	226	6,649	226	£97	£7,191	£7,288	£112	£11,051	£11,162	£208	£18,242	£18,450
Correction	4412011	1346432		Water and	100mm/4.(	Monthly	31	READING	155	5	147	5	£97	£159	£256	£112	£245	£356	£208	£404	£612
														Variance	(£7,032)		Variance	(£10,806)		Variance	(£17,838)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	9209463	293511	[redacted]	General M	32mm/1.2	Six Month	162	READING	12,023	74	11,422	74	£90	£12,292	£12,382	£104	£18,889	£18,993	£194	£31,181	£31,375
Correction	9209463	293511		General M	32mm/1.2	Six Month	162	READING	1,134	7	1,077	7	£90	£1,224	£1,314	£104	£1,782	£1,886	£194	£2,976	£3,170
														Variance	(£11,133)		Variance	(£17,108)		Variance	(£28,240)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	9171312	683325	[redacted]	Farms Dor	75mm/3.0	Six Month	105	READING	2,601	25	0	25	£181	£1,435	£1,616	£0	£0	£0	£181	£1,435	£1,616
Correction	9171312	683325		Farms Dor	75mm/3.0	Six Month	105	READING	1,050	10	0	10	£181	£579	£760	£0	£0	£0	£181	£579	£760
														Variance	(£856)		Variance	£0		Variance	(£856)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	83918	349595	[redacted]	Cattle Tro	20mm/.75	Six Month	154	READING	6,523	42	0	42	£27	£6,366	£6,394	£0	£0	£0	£27	£6,366	£6,394
Correction	83918	349595		Cattle Tro	20mm/.75	Six Month	154	READING	770	5	0	5	£27	£752	£779	£0	£0	£0	£27	£752	£779
														Variance	(£5,615)		Variance	£0		Variance	(£5,615)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	9109389	1365629	[redacted]	Hospitals	15mm/.50	Six Month	212	IND AVE	6,408	30	6,088	30	£38	£6,600	£6,638	£45	£10,143	£10,187	£82	£16,743	£16,825
Correction	9109389	1365629		Hospitals	15mm/.50	Six Month	212	IND AVE	212	1	201	1	£38	£218	£256	£45	£336	£380	£82	£554	£636
														Variance	(£6,382)		Variance	(£9,807)		Variance	(£16,189)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	9286670	805710	[redacted]	Energy pro	20mm/.75	Six Month	34	IND AVE	927	27	881	27	£6	£935	£941	£7	£1,438	£1,445	£13	£2,373	£2,386
Correction	9286670	805710		Energy pro	20mm/.75	Six Month	34	IND AVE	34	1	32	1	£6	£34	£40	£7	£53	£60	£13	£87	£100
														Variance	(£901)		Variance	(£1,385)		Variance	(£2,286)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	9292685	580048	[redacted]	Drinks Ma	20mm/.75	Six Month	147	IND AVE	3,685	25	3,501	25	£26	£3,796	£3,822	£31	£5,833	£5,864	£57	£9,628	£9,685
Correction	9292685	580048		Drinks Ma	20mm/.75	Six Month	147	IND AVE	0	0	0	0	£26	£0	£26	£31	£0	£31	£57	£57	£83
														Variance	(£3,796)		Variance	(£5,833)		Variance	(£9,628)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	92787736	696490	[redacted]	Food Man	20mm/.75	Six Month	57	IND AVE	1,783	31	1,694	31	£10	£1,836	£1,847	£12	£2,820	£2,834	£22	£4,659	£4,681
Correction	9278736	696490		Food Man	20mm/.75	Six Month	57	IND AVE	57	1	54	1	£10	£59	£69	£12	£90	£102	£22	£149	£171
														Variance	(£1,778)		Variance	(£2,732)		Variance	(£4,510)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	8864747	798960	[redacted]	Other Reti	100mm/4.(	Six Month	7	READING	174	25	165	25	£22	£143	£165	£25	£220	£245	£47	£363	£410
Correction	8864747	798960		Other Reti	100mm/4.(	Six Month	7	READING	7	1	7	1	£22	£6	£28	£25	£9	£34	£47	£15	£62
														Variance	(£137)		Variance	(£211)		Variance	(£348)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	9272644	580960	[redacted]	Cattle Tro	15mm/.50	Six Month	114	READING	3,078	27	0	27	£20	£3,106	£3,127	£0	£0	£0	£20	£3,106	£3,127
Correction	9272644	580960		Cattle Tro	15mm/.50	Six Month	114	READING	228	2	0	2	£20	£230	£250	£0	£0	£0	£20	£230	£250
														Variance	(£2,876)		Variance	£0		Variance	(£2,876)
	Customer R	Meter Ref	Customer / Company Name	Industry C	Pipe Size	Read Freq	Accrual Da	Read Histo	Water volu	Water volu	Sewerage	Sewerage	Water Star	Water Volun	Total Water Ch	Sewerage	Sewerage V	Total Sewer	Total accru	Total accrual	Total Accrual
Per DCR	1282435	298840	[redacted]	Dept of Ag	150mm/6.(	Six Month	133	READING	17,688	133	16,804	133	£590	£18,143	£18,733	£681	£27,881	£28,562	£1,271	£46,024	£47,295
Correction	1282435	298840		Dept of Ag	150mm/6.(	Six Month	133	READING	8,645	65	8,213	65	£590	£8,968	£9,457	£681	£13,826	£14,307	£1,271	£22,794	£23,780
														Variance	(£9,276)		Variance	(£14,254)		Variance	(£23,530)
														Total Accrual Adj	(£102,060)			(£115,621)			(£217,681)

Appendix I – Calculation of Road Drainage Charges

The calculation of Road Drainage charges was prepared on the following basis:

i The total urban road and footway surface area was obtained (Source Roads Service),
   a. Urban road surface area = 39.3million m^2
   b. Urban footway surface area = 17.0million m^2
   c. Total Urban road & footway surface area = 56.3million m^2

ii The average annual rainfall in Northern Ireland over the last 10 years was obtained (Source: Met Office).

   Average annual rainfall = 1.14m

iii The average volume of rain and therefore the run-off from roads and footpaths discharged into NIW sewers and storm drains was calculated as follows:

   56.3million m^2 x 1.14m = 64.2million m^3

NIW's network information management system (NIMS) indicated that for the largest 105 urban areas in N Ireland the length of combined sewers and the length of stormwater sewers was split as detailed in the following table. These figures were adjusted to allow for those storm water sewers which rather than discharging into a watercourse were connected into the combined system.

	Km	% of total
Combined sewers	4,378	50.35%
Storm water sewers	4,317	49.65%
Total	8,695	100.00%

The unit costs of R & V applied were obtained using the Trade Effluent Mogden Formula as per the table below:

Mogden Formula element	Cost (£) Per cubic metre	Application
R (Reception)	0.2046	Run off into Storm water sewers
V (Volumetric)	0.2307	Run off into Combined sewers
R+V	0.4353	

Appendix J – Monthly Income Check Sheet

NI WATER
Income check for March 2017

		ACTION BY	COMPLETE BY
1.	Transaction report for income, bad debt and discount ties up to the GL posting.	[redacted]	05/04/17
2.	DCR listing and TE accrual totals agree to the Table in the Day 3 report.	[redacted]	05/04/17
3.	The number of days in the DCR detailed listing has been increased by the correct number of days in the month	[redacted]	05/04/17
4.	There are no obvious large incorrect items of accrued income in the DCR listing.	[redacted]	05/04/17
5.	Review the DCR, both MW and MS, for any negative items.	[redacted]	05/04/17
6.	Review top 300 customers on DCR for any material over-statement arising from leakage/incorrect meter exchange/faulty meter, etc.	[redacted]	06/04/17
7.	Review DCR for any records where accrued volume is zero, but there is a £ amount.	[redacted]	06/04/17
8.	Total for “Ordinary Customers N-stops” agrees total per “Referred Bills Summary” agrees to total per “N-stop Detail”	[redacted]	06/04/17
9.	N-stop detail does not contain any duplicate or triplicate lines.	[redacted]	06/04/17
10.	Debit balance and credit balances in the Day 3 report agree to the debt report.	[redacted]	05/04/17
11.	Cash in the FN012 summary agrees to the cash report.	[redacted]	05/04/17
12.	The FN012 Summary Total has the correct balance c/f and b/f.	[redacted]	06/04/17
13.	Have all the correct adjustments been made for additional provisions/provision release?	[redacted]	06/04/17
14.	Does the summary Excel income report agree to Oracle?	[redacted]	11/04/17

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 24 REGULATORY ACCOUNTS (CURRENT COST)
BALANCE SHEET AS AT 31 MARCH (TOTAL)

				1	2	3	4	5	6	7	8	9
	DESCRIPTION	UNITS	DP	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
A	FIXED ASSETS											
1	Tangible assets	£m	3	8,438.992	8,707.701	8,859.341	9,043 822	9,371.639				
2	Third party contributions	£m	3	-313.278	-384.624	-440.445	-481 575	-536.176				
B	OTHER OPERATING ASSETS AND LIABILITIES											
3	Working capital	£m	3	-81.590	-93.032	-97.443	-96 556	-100.864				
4	Cash	£m	3	9.102	1.637	0.792	2 015	0.412				
5	Short term deposits	£m	3	5.300	0.600	0.020	1 000	2.501				
6	Overdrafts	£m	3	0.000	0.000	0.000	0 000	0.000				
7	Infrastructure renewals prepayment/(accrual)	£m	3	3.341	0.050	-0.702	-5 844	-0.921				
8	Net operating assets	£m	3	-63.847	-90.745	-97.333	-99 385	-98.872				
C	NON-OPERATING ASSETS AND LIABILITIES											
9	Borrowings	£m	3	0.000	0.000	0.000	0 000	0.000				
10	Non-trade debtors	£m	3	0.007	0.020	0.197	0.176	0.369				
11	Non-trade creditors due within one year	£m	3	-5.218	-2.203	-2.477	-2.746	-3.165				
12	Investment - loan to group company	£m	3	0.000	0.000	0.000	0 000	0.000				
13	Investment - other	£m	3	0.106	0.091	0.091	0 091	0.091				
14	Corporation tax payable	£m	3	0.000	0.000	0.000	0 000	0.000				
15	Ordinary share dividends payable	£m	3	0.000	0.000	0.000	0 000	0.000				
16	Preference share dividends payable	£m	3	0.000	0.000	0.000	0 000	0.000				
D	CREDITORS AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR											
17	Borrowings	£m	3	-882.560	-911.560	-947.560	-983 560	-1013.560				
18	Other creditors	£m	3	-96.184	-95.668	-93.773	-91.751	-89.304				
E	PROVISION FOR LIABILITIES AND CHARGES											
19	Deferred tax provision	£m	3	-187.416	-173.693	-197.982	-195.465	-202.263				
20	Post employment asset / (liabilities)	£m	3	-4.123	2.784	-9.304	-5 880	-54.767				
21	Other provisions	£m	3	-9.589	-10.315	-5.837	-5 035	-4.887				
F	PREFERENCE SHARE CAPITAL											
22	Preference share capital	£m	3	0.000	0.000	0.000	0 000	0.000				
23	Net assets employed	£m	3	6,876.890	7,041.788	7,064.918	7,178 692	7,369.105				
G	CAPITAL AND RESERVES											
24	Called up share capital	£m	3	500.000	500.000	500.000	500 000	500.000				
25	Share premium	£m	3	0.000	0.000	0.000	0 000	0.000				
26	Profit and loss account	£m	3	-355.720	-360.120	-400.480	-400.102	-438.992				
27	Current cost reserve at 31 March	£m	3	6560.920	6730.218	6,793.708	6,907.104	7,136.407				
28	Other reserves	£m	3	171.690	171.690	171.690	171 690	171.690				
29	Total capital and reserves	£m	3	6,876.890	7,041.788	7,064.918	7,178 692	7,369.105				

Table 24 – CC Balance Sheet as at 31 March 2017

The retained current cost profit for the year is £7.731m. The P&L reserves in the balance sheet decreased by £38.890m. The difference of £46.621m represents the loss on the pension fund net of deferred tax, as shown below:

Retained profit for the year	£7.731m
Pension scheme gain net of deferred tax	(£ 46.621m)
Movement in P&L Account	**(£ 38.890m)**

- No minority interests exist.

The elements of PPP included in the table are as follows:

Line 1 - Tangible assets

	Alpha	Omega	Kinnegar	Total
	£m	£m	£m	**£m**
Gross	[redacted]	[redacted]	[redacted]	[redacted]
Acc. Deprec	[redacted]	[redacted]	[redacted]	[redacted]
NBV	[redacted]	[redacted]	[redacted]	[redacted]

* Includes original capital value of Alpha PPP, assets passed to the concessionaire at the commencement of the contract and subsequent additions of capital maintenance all elements indexed to give a current cost value.

Line 3 - Working capital

	Alpha	Omega	Kinnegar	Total
	£m	£m	£m	**£m**
Accruals	[redacted]	[redacted]	[redacted]	[redacted]

Line 11 - Non-trade creditors due within one year

	Alpha
	£m
Lease obligation due < 1 yr	[redacted]

Line 18 - Other creditors

	Alpha
	£m
Lease obligation due > 1 yr	[redacted]

Line 21 - Other provisions

	Omega
	£m
Provisions	[redacted]

Significant features and movements

Line 1 - Tangible assets

See commentary to Table 19.

Line 2 - Third party contributions

Increased by approximately £54.6m shown as follows:

	£m
Infrastructure contributions (including £31.6m sewers adopted)	41.9
Non-Infrastructure contributions (including £0.5m adoptions)	1.8
Amortisation of non-infrastructure contributions and government grants	(4.1)
Indexation	15.0
	54.6

Line 3 - Working capital

See commentary to Table 26.

Line 4 - Cash

See commentary to Table 19.

Line 5 - Short term deposits

See commentary to Table 19.

Line 17 - Borrowings

See commentary to Table 19.

Line 19 - Deferred tax provision

See commentary to Table 19.

Line 20 - Post employment asset / (liability)

See commentary to Table 19.

Line 21 - Other provisions

See commentary to Table 19.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 25 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
ANALYSIS OF FIXED ASSETS BY ASSET TYPE (TOTAL)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	5	9
				WATER SERVICE				SEWERAGE SERVICE				
				INFRASTRUCTURE ASSETS	OPERATIONAL ASSETS	OTHER TANGIBLE ASSETS	SUBTOTAL	INFRASTRUCTURE ASSETS	OPERATIONAL ASSETS	OTHER TANGIBLE ASSETS	INFRASTRUCTURE ASSETS	TOTAL
A	**GROSS REPLACEMENT COST**											
1	Gross replacement cost at 1 April	£m	3	3,496.603	1,118.596	55.956	4,671.155	3,596.281	1,777.360	50.415	5,424.056	10,095.211
2	AMP adjustment	£m	3				0.000					0.000
3	RPI adjustment	£m	3	111.159	33.450	1.764	146.373	110.272	54.330	2.053	166.655	313.028
4	Disposals	£m	3	0.000	-3.277	-0.987	-4.264	0.000	-0.462	-0.789	-1.251	-5.515
5	Additions	£m	3	17.954	27.834	2.974	48.762	44.020	65.121	2.336	111.477	160.239
6	Gross replacement cost at 31 March	£m	3	3,625.716	1,176.603	59.707	4,862.026	3,750.573	1,896.349	54.015	5,700.937	10,562.963
B	**DEPRECIATION**											
7	Depreciation at 1 April	£m	3	54.614	353.253	43.103	450.970	2.786	549.771	47.862	600.419	1,051.389
8	AMP adjustment	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	AMP adjustment - gross MEA revaluation	£m	3				0.000					0.000
10	lives	£m	3				0.000					0.000
11	RPI adjustment	£m	3	1.723	11.064	1.366	14.153	0.083	17.251	1.523	18.857	33.010
12	Disposals	£m	3	0.000	-2.361	-0.583	-2.944		-0.233	-0.753		-3.930
13	Charge for year	£m	3	0.000	42.262	3.053	45.315	0.000	62.294	3.245	65.539	110.854
14	Depreciation at 31 March	£m	3	56.337	404.218	46.939	507.494	2.869	629.083	51.877	683.829	1,191.323
15	Net book amount at 31 March	£m	3	3,569.379	772.385	12.768	4,354.532	3,747.704	1,267.266	2.138	5,017.108	9,371.640
16	Net book amount at 1 April	£m	3	3,441.989	765.343	12.853	4,220.185	3,593.495	1,227.589	2.553	4,823.637	9,043.822

Table 25 – Analysis of Fixed Assets by Asset Type (Total)

The following asset categories have been analysed in the table as follows:

- 'Infrastructure assets' include infrastructure assets only.
- 'Non-specialised operational assets' include active market value land, buildings and civils.
- 'Specialised operational assets' include land, buildings, civils and fixed plant.
- 'Other tangible assets' include surplus land, buildings and civils, mobile plant and IT.

Gross Replacement Cost at 1 April and Depreciation at 1 April

The total opening balances for gross replacement cost and depreciation at 1 April 2016 have been brought forward from the total closing balances for gross replacement cost and depreciation at 31 March 2016. The analysis across asset categories is based on analysis within the fixed asset register.

AMP Adjustment

There was no AMP adjustment during the year.

RPI Adjustment

In April 2016, all assets in the Fixed Asset Register (FAR) were indexed upwards using year end Retail Price Index (RPI) to be consistent with OFWAT.

Impairment

There was no impairment required of surplus lands, buildings and civils during the year.

Disposals

Disposals during the year mainly consisted of surplus land, buildings, civils, mobile plants (lorries and vans) and fixed plant assets. All disposals have depreciation in the month of disposal.

Decommissioned Assets

A number of assets (NCRC - £9,705,705.49) were decommissioned during the year. Decommissioned assets are assets that are no longer in use but still have a net current replacement cost (NCRC) value at the time. In order to account for this, the assets are fully depreciated in year to bring the NCRC down to nil.

Additions

Additions consisted of capital expenditure incurred during the year plus adopted sewers, sewage pumping stations, and PPP assets (see below). When the assets created by the capital expenditure are commissioned, they are put onto the fixed asset register and depreciation commences the following month.

In accordance with the regulatory accounting guidelines, fixed asset additions are stated gross of capital contributions but net of IRE. This gives rise to the reconciliation with the capital works programme and statutory accounts below:

	£'000
Total expenditure in CWP (incl.) Operations)	**151,788**
Add: Water and sewer connections	3,049
Add: Capital maintenance Omega and Kinnegar	1,351
Add: adopted assets – infrastructure	31,585
Add: adopted assets – non-infrastructure	486
Less: de-capitalised assets	(384)
Add: capitalised interest	3,516
Less: expenditure classified as opex under IFRS	(1,117)
Total additions per statutory accounts	**190,274**
Less Capital maintenance Omega and Kinnegar	(1,351)
Add back: IRE treated as opex repairs under IFRS	1,117
Less: interest capitalised	(3,516)
Less: IRE	(29,931)
Add: PPP residual interest	3,645
Total additions per regulatory accounts	**160,238**

PPP Assets Additions

During the year, there were on-balance sheet additions to PPP assets. Therefore, there was an element in the table relating to PPP assets totalling to [redacted] relating to the Alpha capital maintenance fund.

There is also additional residual interest for PFI Kinnegar asset and Omega asset with a current cost of [redacted] which is included in Table 25 under specialised operational, civil. The total residual interest at 31 March 2017 is [redacted] (31 March 2016: [redacted]); which includes indexation for 2016-17 of £873k.

Depreciation Charge for Year

Current cost depreciation charge during the year was calculated based on the opening GCRC at 1 April 2016. Additions and disposals during the year were taken into account in calculating the depreciation charge.

Commentary

All assets were analysed to each of their respective asset categories and service activities to identify the water and sewerage services. The management and general service activity assets, with a GCRC of £90,053,571.46 (15/16: £88,043,454.52) as at 31 March 2017, could not be readily identified as water and sewerage services and have been split as per IFM: Water 41% and Sewerage 59%.

Table 25 has also been adjusted to include only the appointed business and exclude the unappointed business relating to vehicle maintenance carried out for third parties. This has been adjusted through Water Services – Other Assets.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 26 REGULATORY ACCOUNTS
WORKING CAPITAL

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
1	Stocks	£m	3	2.379	2.021	2 269	2.368	2.347				
2	Trade debtors - measured household	£m	3	0.000	0.000	0 000	0.000	0.000				
3	Trade debtors - unmeasured household	£m	3	0.000	0.000	0 000	0.000	0.000				
4	Trade debtors - measured non household	£m	3	7.596	8.037	8.647	7.110	7.140				
5	Trade debtors - unmeasured non household	£m	3	0.402	2.764	2.681	2.714	2.811				
6	Other trade debtors	£m	3	0.612	0.383	0 364	0.367	0.706				
7	Measured income accrual	£m	3	10.777	9.180	9.438	10.230	9.513				
8	Prepayments and other debtors	£m	3	9.431	6.783	9.432	9.235	9.845				
9	Trade creditors	£m	3	-2.620	-6.656	-21 205	-8.097	-5.892				
10	Deferred income - customer advance receipts	£m	3	-1.164	-3.459	-3.546	-4.069	-4.191				
11	Short term capital creditors	£m	3	-56.699	-59.734	-52.101	-60.871	-66.837				
12	Accruals and other creditors	£m	3	-52.304	-52.351	-53.422	-55.543	-56.306				
13	Total working capital	£m	3	-81.590	-93.032	-97.443	-96.556	-100.864				

Table 26 – Working Capital

Lines 2 – 6 - Trade Debtors

Trade debtors are split into the five categories shown in lines 2-6 using the information from the General Ledger and the aged debtors analysis provided in the Echo pack.

The elements of PPP included in the table are as follows:

Line 12 - Accruals and other creditors

Alpha	Omega	Kinnegar	Total
£m	£m	£m	**£m**
[redacted]	[redacted]	[redacted]	[redacted]

Significant movements from last year

Line 4 - Trade debtors - measured non household

This has remained consistent at £7.1m in 2015/16 and £7.1m at 2016/17.

Line 5 - Trade debtors - unmeasured non household

This has increased from £2.7m in 2015/16 to £2.8m in 2016/17 (3.5%).

Line 7 - Measured income accrual

Measured income accrual has decreased by £0.7m (1.0%) over the period.

Line 9 - Trade creditors

Trade creditors have decreased by £2.2m (27.2%) in the period. This is mainly due to the timing of payments made around the year end, with a higher payment run being made in March 2017 than in the comparative year.

Line 10 - Deferred income – customer advance receipts

Deferred income – customer advance receipts have risen by £0.1m (2.0%) in the period. This is primarily due to an increase in the deferment of standard charges in advance where it has been determined that the work has not yet been completed. The increase in this area has been in relation to standard & large diameter water connections and new sewer connections.

Line 11 - Short term capital creditors

Capital accruals have increased by approximately £6m (9.8%). The main driver for this increase is related to the higher level of capital invoices received from contractors at the end of the comparator year - 2015-16. This is consistent with the increase in relevant* capital additions of 6.8% from £142.0m in 2016 to £151.7m in 2017.

*relevant additions for the short-term capital creditors account exclude those relating to connections, PPP residual interest assets and adopted assets.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 27 REGULATORY ACCOUNTS
MOVEMENT ON CURRENT COST RESERVE (TOTAL)

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
1	Current cost reserve at 1 April	£m	3	6,342.051	6,560.920	6,730.218	6,793.708	6,907.104				
2	AMP adjustment	£m	3	0.000	0.000	0.000	0.000	0.000				
A	RPI ADJUSTMENTS											
3	Fixed assets	£m	3	260.354	202.983	76.985	135.704	280.019				
4	Working capital adjustment	£m	3	-2.641	-2.001	-0.840	-1.516	-3.032				
5	Financing adjustment	£m	3	-30.464	-23.962	-9.183	-16.324	-32.561				
6	Grants and third party contributions	£m	3	-8.380	-7.722	-3.472	-4.468	-15.123				
7	Current cost reserve at 31 March	£m	3	6,560.920	6,730.218	6,793.708	6,907.104	7,136.407				

Table 27 – Movement on current cost reserve

Working capital adjustment

The working capital adjustment includes opening stock at 1st April 2016 plus all the opening short – term debtors and creditors at 1st April 2016, with the following exclusions from the calculation:

- **Stock**
  - Stock relating to unappointed activities £0.007m
- **Debtors**
  - Interest receivable £0.003m
  - Debtors relating to unappointed activities £0.401m
  - Debtors relating to cash remitted to the pension fund not yet recognised £0.367m
- **Creditors**
  - Interest payable £0.580m
  - Cash bond interest payable £0.211m
  - Creditors relating to unappointed activities £1.147m
  - Deferred grants and contributions < 1yr £1.001m
  - PPP Finance lease creditor < 1yr [redacted]

The following indices have been used and applied to the opening working capital balance at 1 April 2015:

RPI	2017	2016
Year end RPI	269.3	261.1
Change in 2015-16	3.14056%	

Working capital adjustment = opening working capital at 1 April 2016 x change in RPI 2016-2017 = £96,555k x 3.14056% = £3,032k

Financing adjustment

The financing adjustment is calculated using opening balances at 01.04.16 as follows:

	£m
Opening net assets	7,178.692
Less Opening net fixed assets	(8,562.247)
	(1,383.553)
Add back: working capital	96.556
=Opening net finance	(1,286.999)
Less:	
Ordinary share dividends payable	0.000
Deferred tax provision	195.464
Add back:	
Pension liability	65.984
Less:	
Deferred tax asset on pension liability	(11.217)
= Revised opening net finance	(1,036.767)
X RPI	3.14056%
Financing Adjustment	**32.560**

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 28 REGULATORY ACCOUNTS
CASH FLOW STATEMENT FOR YEAR ENDING 31 MARCH (TOTAL

				1	2	3	4	5	6	7	8	9
	DESCRIPTION	UNITS	DP	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1	Net cashflow from operating activities	£m	3	181.015	190 580	195.707	170 228	182.677				
A	**RETURN ON INVESTMENTS & SERVICING OF FINANCE**											
2	Interest received	£m	3	0.134	0.114	0.080	0 092	0.074				
3	Interest paid	£m	3	-42.208	-43.723	-45.339	-46 568	-46.945				
4	Interest in finance lease rentals	£m	3	-11.913	-6 933	-6.824	-6.701	-6.562				
5	Non-equity dividends paid	£m	3	0.000	0 000	0.000	0 000	0.000				
6	Net cashflow from returns on investments & servicing of finance	£m	3	-53.987	-50 542	-52.083	-53.177	-53.433				
B	**TAXATION**											
7	Taxation (paid)/received	£m	3	0.000	0 000	-0.017	0 000	0.000				
C	**CAPITAL EXPENDITURE AND FINANCIAL INVESTMENT**											
8	Gross cost of purchase of fixed assets	£m	3	-130.590	-135 971	-134.620	-115 602	-128.215				
9	Receipts of grants and contributions	£m	3	5.757	6 586	7.333	7 980	11.550				
10	Infrastructure renewals expenditure	£m	3	-31.368	-30.118	-31.557	-20.144	-20.145				
11	Disposal of fixed assets	£m	3	1.177	1.164	1.046	1 693	1.096				
12	Movements on long term loans to group companies	£m	3	0.000	0 000	0.000	0 000	0.000				
13	Net cashflow from investing activities	£m	3	-155.024	-158 339	-157.798	-126 073	-135.714				
D	**ACQUISITIONS AND DISPOSALS**											
14	Acquisitions and disposals	£m	3	0.000	0 000	0.000	0 000	0.000				
E	**EQUITY DIVIDENDS**											
15	Equity dividends paid	£m	3	-26.587	-21 391	-21.562	-22 887	-21.510				
F	**MANAGEMENT OF LIQUID RESOURCES**											
16	Net cashflow from management of liquid resources	£m	3	-5.300	4.700	0.580	-0 980	-1.501				
17	Net cashflow before financing	£m	3	-59.883	-34 992	-35.173	-32 889	-29.481				
G	**FINANCING**											
18	Capital in finance lease rentals	£m	3	-3.675	-1.473	-1.672	-1 888	-2.122				
19	New bank loans taken out	£m	3	75.000	29 000	36.000	36 000	30.000				
20	Repayment of bank loans	£m	3	0.000	0 000	0.000	0 000	0.000				
21	Proceeds from share issues	£m	3	0.000	0 000	0.000	0 000	0.000				
22	Net cash inflow from financing	£m	3	71.325	27 527	34.328	34.112	27.878				
23	Increase/(decrease) in cash in the year	£m	3	11.442	-7.465	-0.845	1 223	-1.603				

Table 28 – Cashflow statement

Significant movements from last period

Line 1 - Net cashflow from operating activities

This has increased by £12.449m (7.3%). The reconciliation of operating profit to net cashflow from operating activities is shown in Table 29.

This is summarised in Table 29 as follows:

1	Current cost operating profit	£m	56.925
2	Working capital adjustment	£m	(3.032)
3	Movement in working capital	£m	(1.670)
4	Depreciation	£m	110.854
5	Current cost profit on sale of fixed assets	£m	0.489
6	Infrastructure renewals charge	£m	25.008
7	Other non-cash profit and loss items	£m	(5.897)
8	Net cash flow from operating activities	£m	182.677

Line 3 – Interest paid

Interest paid has increased by 1.0% from £46.568m to £46.945m. This is consistent with an additional loan drawdown of £30m in 2016-2017. The balance on loans can be summarised as follows:

At 1 April 2007	£150m
At 31 March 2008	£307.56m (average for year £228.78m)
At 31 March 2009	£457.56m (average for year £382.56m)
At 31 March 2010	£627.56m (average for year £542.56m)
At 31 March 2011	£737.56m (average for year £682.56m)
At 31 March 2012	£807.56m (average for year £772.56m)
At 31 March 2013	£882.56m (average for year £845.06m)
At 31 March 2014	£911.56m (average for year £897.06m)
At 31 March 2015	£947.56m (average for year £929.56m)
At 31 March 2016	£983.56m (average for year £965.56m)
At 31 March 2017	£1,013.56m (average for year £998.56m)

Line 4 - Interest in finance lease rentals

The Alpha project during 2016-2017 gave rise to [redacted] (2016: [redacted]) interest payable on the associated finance lease. This decrease arises as an element of the unitary charge paid to the concessionaire is allocated by NIW to reducing the principal on the lease (see Line 18).

Line 8 - Gross cost of purchase of fixed assets

These have decreased by £12.613m (10.9%). This is consistent with capital expenditure plans for 2016-17 and the movement in capital creditors across the period.

Line 10 - Infrastructure Renewals Expenditure

IRE for 2016-2017 compared to 2015-2016 can be shown as follows:

IRE	2016-2017	2015-2016	Increase/(Decrease) in period	Increase/(Decrease) in period
	£m	£m	£m	%
Water	19.497	11.134	8.363	75.1%
Sewerage	10.434	9.010	1.424	15.8%
Total	29.931	20.144	9.787	48.6%

Line 16 - Net cashflow from management of liquid resources

Management of liquid resources represents the movement in monies held on short-term deposit accounts.

Monies on deposit have increased by £1.501m from the end of 2015-2016 to the end of 2016-2017 with a consequent decrease in cashflow. The balance on deposit at the end of 31st March 2017 is £2.501m.

Line 18 - Capital in finance lease rentals.

An amount of [redacted] was made in payment against the Alpha PPP finance lease.

Line 19 - New bank loans taken out

In 2016-2017, £30m of additional loan notes were drawn down from DfI. These new loans were required to part finance the ongoing capital expenditure programme with the balance of capital expenditure financed by working capital.

PPP

The elements of PPP included in the cashflow are as follows:

The commentary to Table 20 (Current Cost P&L Account) outlines the PPP element contained within operating costs that contributed to the current cost operating profit within Line 1 and depreciation Line 4.

The commentary for Table 26 (Working Capital) outlines the elements of PPP that are contained within working capital that feed into the movement in working capital above.

The PPP aspect to lines 4 and 18 in Table 28 are outlined in ‘significant movements from last period’ in this commentary.

Included in Line 8: Gross cost of purchase of fixed assets in Table 28 is [redacted] in respect of capital maintenance additions for Alpha PPP paid for via the unitary payments. All other capital expenditure for Alpha is accounted for through the repayment of the finance lease.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 29 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING
RECONCILIATION OF OPERATING PROFIT TO NET CASH FLOW FROM OPERATING ACTIVITIES (TOTAL

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
1	Current cost operating profit	£m	3	19.872	19.799	59.111	53.738	56.925				
2	Working capital adjustment	£m	3	-2.641	-2.001	-0.840	-1.516	-3.032				
3	Movement in working capital	£m	3	0.595	8.388	12.045	-9.675	-1.670				
4	Receipts from other income	£m	3	0.000	0.000	0.000	0.000	0.000				
5	Depreciation	£m	3	150.895	135.458	104.185	110.522	110.854				
6	Current cost profit on sale of fixed assets	£m	3	-0.303	-0.208	-0.488	-0.091	0.489				
7	Infrastructure renewals charge	£m	3	30.761	33.409	32.309	25.286	25.008				
8	Other non-cash profit and loss items	£m	3	-18.164	-4.265	-10.615	-8.036	-5.897				
9	Net cash flow from operating activities	£m	3	181.015	190.580	195.707	170.228	182.677				

Chapter 30 – Capital investment Summary Report

Introduction

This chapter provides a consolidated report on Capital investment, which draws on Chapters 32, 35, 26, 36a and 40 and associated tables.

PPP

No PPP expenditure is reported in these tables. There was no Capital spend in 2016/17 relating to PPP that is not included within the unitary charge payments. In relation to Capital additions, the only Capital not included in this table is the PPP Alpha Capital maintenance charge of [redacted]

Capital investment driver allocation (Service categorisation and purpose allocation)

The Capital Investment Driver Allocation (CIDA) methodology has remained consistent as per recent PC10/PC13 years. NI Water captures Service Categorisation, Life Categories (as reported in Table 34) and Purpose Allocation within our CIDA data capture. This data is captured within CPMR at project level and used for CIM (Table 40) and the other related AIR tables.

Based upon the PC15 query responses on CIDA allocation NI Water have revised the CIDA allocation manual during 2016/17 to reflect the revisions. These are being integrated into the capital projects. A CIDA training programme should be delivered during the next financial year to ensure project managers and consultants, maintain an understanding of the CIDA allocation process. This will enable new staff to be trained and current staff to have a refresher.

No apportionment has taken place during the analysis and table population stage as this was completed by Project Managers at the initiation of the project, and reviewed at appropriate gateways for EP projects.

During 2016/17, all CIM (Table 40) information has been reported directly from CPMR without the detailed manual assessment required in previous years. For the related AIR Tables M & G spend has been reported from CPMR, but Operational Capital has had to be analysed manually as per previous years as the data on CPMR is not in a format that allows for robust reporting. Further refinements have been delayed to allow for more automation for the completion of the tables. As a result, the same process used in AIR 16 has been adopted for AIR 17.

Assets Adopted at Nil Cost

Sewer adoptions paid by third parties of £31.585m are included in the £42.433m in column 4, line 7 of Table 32 within Sewerage infrastructure enhancements. Sewerage Pumping Stations paid by third parties of £0.486m are included in the £6.989m in Col 5, line 12 within Sewerage non infrastructure enhancements.

All of the investment reported in block D of Table 36 is reported as ‘Supply Demand Balance: New Development’.

The calculation of gross asset valuation for adopted sewerage assets is based on the unit costs derived from NI Water sewer framework rates.

The unit costs are applied by diameter banding and total lengths laid. The costs include pipe laying, pipe supply, laterals, manholes and compensation.

Total Asset Additions reconciliations

- Total asset additions – Water Service – Check to Table 25 line 5 col 4.
  For AIR 16 the reported numbers in these two tables are as follows:
  Table 25 – £48.762m
  Table 36 – £48.289m

The difference in the above two figures are explained as follows:

a) PPP Alpha Capital maintenance of [redacted] is not included in Table 36
b) £27k included in Table 25 relates to Decapitalised projects in 2016/17

- Total asset additions – Sewerage Service – Check to Table 25 line 5 Col 8.
  For AIR 16 the reported numbers in these two tables are as follows:
  Table 25 – £111.477m
  Table 36 – £108.188m

The difference in the above two figures is explained as follows:

c) PPP Omega [redacted]) and PPP Kinnegar ([redacted] residual asset additions were not included in Table 36.
d) £357k included in Table 25 relates to Decapitalised projects in 2016/17

Expenditure to reduce leakage

The table below provides a breakdown of the leakage expenditure in 2016/17. This includes the purpose allocations, which have followed the principle as set out in PC10 Final Determination.

It should be noted that the figures reported include Leakage repair costs. These are completed by the Water Networks function, but the Leakage and Water Networks are now part of the Water Production Function. The opex costs reported in the table are the total opex costs relating to Leakage. This is comprised of Leakage Function staff costs and leakage repair costs incurred by both the Leakage and Water Network function.

Activity	**2016/17 actual spend per category £m**	**Purpose allocation**
Leakage detection costs	3.900	OPEX
Leakage repair costs	1.200	OPEX
Leakage detection costs - capex	0.537	Base
Leakage infra replacement repair costs - capex	0.369	Base
Leakage detection equip	0.081	Base
Leakage software upgrades and developments	0.002	Base
New leakage technology	0.000	Base
DMA studies	0.381	Base
Trunk Main studies	0.024	SDB Growth
DMA optimisation	0.144	SDB Growth
Water balance asset data assessments	0.038	Base
ELL reviews	0.170	Base
Pressure Management	0.356	SDB Growth
PRV replacements	0.270	Base

Activity	2016/17 actual spend per category £m	Purpose allocation
GSM Loggers/Meter studies/Meter replacement	0.817	Base
Other	0.000	Base
Total (OPEX)	**5.100**	
Total (Capex)	**3.190**	
Total Leakage investment	**8.290**	

Capital programme variance

The Capital programme for 2016/17 when compared to the PC15 final determination has under delivered in the 'Water Service' but delivered in the 'Sewerage Service'. It is important to note however that NI Water was not funded to deliver the PC15 Final Determination and produced an adjusted budget, which reflected the reduced funding allocation. This adjusted budget reduced PE funding by £11.1m, from £160.7m to £149.6m.

NI Water successfully delivered the PE funding for 2016/17 (with a Gross nominal amount of £142.5m).

The main reasons for variance in 2016/17 are as follows:

a) The largest variances are found in Sub programme 2 (Base maintenance water), Sub programme 12 (Sewerage Maintenance, Flooding and DG5) and Sub programme 16 (Wastewater treatment (new starts). The largest underspend has occurred in Sub-programme 16 where delays encountered with five WwTW schemes (Ballycastle, Ballykelly, Clabby, Ards South and Dundrum) resulted in approximately £5m of an underspend. This underspend did not offset an overspend in Sub programme 2 of £7.02m or Sub programme 23 of £4.66m. The overspend in Sub programme 2 has been assessed and expenditure in subsequent years will be reduced in order to remain with PC15 budgets. The overspend in sub programme 23 is considered to be caused by higher than anticipated levels of connections due to an increase in construction during 2016/17. NI Water have insufficient data to indicate whether this increase is an anomaly or indicative of an emerging trend.

Year 2 saw the overspend in base maintenance which had emerged in 2015/16 continue (£80.18m actual against £78.57m baseline when stated in 12/13 prices) with the position for 2016/17 being £91.98m actual against £78.10m baseline. This £13.89m overspend is significant but has occurred for valid programming reasons and will be addressed as PC15 proceeds.

Energy efficiency and renewable energy schemes

A summary of Energy efficiency and renewable energy schemes is included in Annex A at the end of this document.

2016/17 Q4 Capital Investment Monitoring Return (Table 40)

Company Baseline

A PC15 baseline is included in this CIM submission. The PC15 capital baseline is a detailed listing of projects and programmes of work, the costs and outputs from which have been presented to the Utility Regulator through the Price Control process. The baseline is expressed in 2012/13 prices, post efficiency.

Capital Expenditure Commentary

This submission is completed primarily using CPMR with full reconciliation completed to ORACLE.

The following is a summary of CAPEX expenditure in 2016/17 (excluding contributions) at the end of Q4 as per ORACLE and reconciled to the CIM submission shown in money of the day.

	£m
Total Gross capital expenditure as per ORACLE	154.337
Capital works programme expenditure	105.970
Operations Capital from CPMR	26.127
M & G capital from CPMR	9.918
Capitalised Salaries and overheads	12.318
Rounding from ORACLE to CAPTRAX/CPMR	0.004
Reconciled Total	154.337

During the period (April 2016 – March 2017), there has been Capital income in the form of Grants and Contributions totalling to £10.265m. This figure is not included on the CIM submission.

Inflation Assumptions

The project costs reported in the 'current actual or projected' portion of the CIM are in current prices. All project costs are captured in nominal prices as no inflation assumptions are applied within CPMR.

Capital expenditure within the Final Determination was inflated by RPI, which was linked to projections made by the Office for Budgetary Responsibility (OBR) in March 2014. This allowed 3.4% RPI annually through the six year period. Table 2 shows actual RPI in 2015-16 and OBR forecast figures for the years 2016-17 to 2020-21 (based on Mar 17 economic and fiscal outlook). This shows a reduction in inflation levels from that assumed in the PC15 FD. NI Water continue to monitor the OBR view of RPI.

Inflation (RPI) projections

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
PC15 FD assumed Indices	266.800	275.871	285.250	294.949	304.977	315.346
	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%
Current actual and projected indices (OBR Mar 2017)	259.433	264.992	275.326	284.687	293.513	302.612
	1.1%	2.1%	3.9%	3.4%	3.1%	3.1%

Reconciliation with Table 36

Table 36 - Water service nominal expenditure

	Gross Capital expenditure - Water Service	T36 £m	CIM £m	Variance £m	Variance %
1	MNI (gross of grants and contributions)	23.543	22.285	-1.258	-5.65
2	Infrastructure renewals expenditure (gross)	19.497	20.710	1.213	5.86
3	Capex: Total quality enhancement programme	14.177	14.238	0.060	0.42
4	Capital expenditure - customer service	3.175	2.949	-0.226	-7.66
5	Capital expenditure - supply demand balance	7.393	7.304	-0.089	-1.22
6	Gross Capital expenditure - Water Service	67.786	67.485	-0.301	-0.45

Table 36 - Sewerage service nominal expenditure

	Gross Capital expenditure - Sewerage Service	T36 £m	CIM £m	Variance £m	Variance %
7	MNI (gross of grants and contributions)	46.247	45.999	-0.248	-0.54
8	Infrastructure renewals expenditure (gross)	10.434	10.628	0.194	1.82
9	Capex: Total quality enhancement programme	13.559	13.872	0.313	2.26
10	Capital expenditure: customer service	5.359	5.322	-0.038	-0.71
11	Capital expenditure supply demand balance	10.951	11.027	0.076	0.69
12	Gross Capital expenditure - Sewerage Service	86.551	86.848	0.297	0.34

The above table shows the comparison between the CIM (Table 40) and Table 36. Assets adopted at NIL cost reported in Table 36 have been excluded from this comparison. The variances shown arise because the data held for population of the AIR tables has direct links between the asset type, service area and investment driver. Where there are complex projects this detail is required to provide an accurate analysis of the expenditure. The summary detail on the CIM does not give a full transparency of this detail as the direct link between asset type, service area and investment area is lost but does give a reasonable interpretation of the investment. In addition, direct comparison is difficult as Capitalised Salaries and overheads are a single line on the CIM, which has had a service allocation, and purpose allocation applied based on the rest of the programme. For AIR 17 the Capital salaries and overheads were applied by examining each of the three elements of the programme namely, CWP, M & G and Operations Capital and assigning Salaries and Overheads against each of these programmes before combining into a single line. Whilst still not exact it more closely reflects the way salaries are allocated to individual projects. Within AIR, the Capitalised Salaries and overhead information is included within individual project costs.

Sixteen Box Summary

2015/16 Current Actual Projected 16 box summary showing expenditure £m (nominal)

	Quality Enhancement	Base Service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	11.67	20.71	0.68	5.38	38.44
Water Non-Infrastructure	2.56	22.28	2.27	1.93	29.04
Sewerage Infrastructure	4.52	10.63	1.99	5.75	22.89
Sewerage Non-Infrastructure	9.35	46.00	3.33	5.28	63.96
Totals	28.11	99.62	8.27	18.33	154.33

2015/16 Current Actual Projected 16 box summary in percentages

	Quality Enhancement	Base Service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	7.6%	13.4%	0.4%	3.5%	24.9%
Water Non-Infrastructure	1.7%	14.4%	1.5%	1.2%	18.8%
Sewerage Infrastructure	2.9%	6.9%	1.3%	3.7%	14.8%
Sewerage Non-Infrastructure	6.1%	29.8%	2.2%	3.4%	41.4%
Totals	18.2%	64.5%	5.4%	11.9%	100.0%

2015/16 Baseline 16 box summary showing expenditure £m (2012/13 prices)

	Quality Enhancement	Base Service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	11.89	13.63	1.09	7.81	34.42
Water Non-Infrastructure	4.03	21.42	3.19	5.11	33.75
Sewerage Infrastructure	7.21	9.20	5.28	4.17	25.85
Sewerage Non-Infrastructure	12.36	33.85	3.16	4.94	54.30
Totals	35.49	78.10	12.72	22.03	148.34

2015/16 Baseline Projected 16 box summary in percentages

	Quality Enhancement	Base Service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	8.0%	9.2%	0.7%	5.3%	23.2%
Water Non-Infrastructure	2.7%	14.4%	2.2%	3.4%	22.8%
Sewerage Infrastructure	4.9%	6.2%	3.6%	2.8%	17.4%
Sewerage Non-Infrastructure	8.3%	22.8%	2.1%	3.3%	36.6%
Totals	23.9%	52.6%	8.6%	14.9%	100.0%

PC15 16 box FD baseline (2012/13 prices): Expenditure across the PC15 programme £m

	Quality Enhancement	Base Service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	72.09	78.15	6.94	54.84	212.02
Water Non-Infrastructure	27.11	125.28	16.68	34.07	203.14
Sewerage Infrastructure	36.83	59.48	21.05	27.53	144.89
Sewerage Non-Infrastructure	60.91	1 201.49	20.50	33.48	316.38
Totals	196.95	464.40	65.17	149.92	876.43

PC15 16 box summary: Baseline expenditure by percentage across the PC15 programme

	Quality Enhancement	Base Service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	8.23%	8.92%	0.79%	6.26%	24.19%
Water Non-Infrastructure	3.09%	14.29%	1.90%	3.89%	23.18%
Sewerage Infrastructure	4.20%	6.79%	2.40%	3.14%	16.53%
Sewerage Non-Infrastructure	6.95%	22.99%	2.34%	3.82%	36.10%
Totals	22.47%	52.99%	7.44%	17.11%	

Variance on Nominated Outputs (2012/13 prices)

Figure 1 illustrates the movement in the PC15 nominated output projects: this is based on the PC15 FD baseline and assumes a fully funded Final Determination budget with catch-up. In 2014/15, a number of nominated projects were delayed and carried into PC15. In addition, PE reductions have had an impact in PC15 year 1 and 2. The variance showing in 2021/22 is due to the fact that project KG177 Portadown DAP Stage 2 has been pushed into PC21 while KR489 Glenmachan Strategic Project Phase 1a Sicily & Marguerite Park Flood Alleviation is being reviewed and reworked. NI Water will continue to ensure sustained focus on delivery as the catch-up from 2018/19 to 2019/20 will require significant effort.

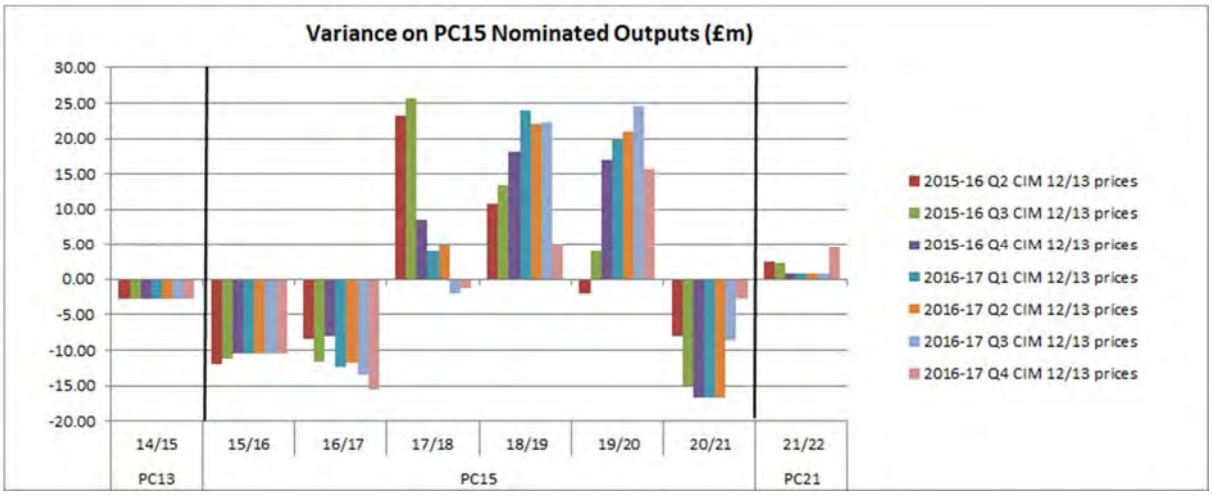


Figure 1: Variance on Nominated Outputs

CIM summary Table

Code	Title	Baseline £m (2012/13 prices)	Current actual or projected 2015/16 £m (nominal)	Current actual or projected 2015/16 £m (2012/13 prices using latest OBR RPI forecast)
0	Staff Salaries and on-costs	11.22	12.32	11.37
1	Base maintenance (Water)	6.67	7.54	6.96
2	Base maintenance (sewerage)	18.94	28.42	26.24
3	Water resources	1.73	2.92	2.70
4	Water treatment works	2.17	0.08	0.07
5	Water trunk mains	1.09	0.22	0.21
6	Service reservoirs and clear water tanks	2.82	1.08	1.00
7	Service reservoir rehabilitation	3.68	3.42	3.16
8	Water mains rehabilitation	17.83	18.87	17.43
9	Leakage	2.69	2.70	2.49
10	Ops capital Water	6.16	8.27	7.64
12	Sewerage Maintenance, UIDs, Flooding	15.61	20.04	18.51
15	Wastewater treatment (carryover)	0.00	0.29	0.26
16	Wastewater treatment (new starts)	15.11	7.72	7.12
17	Small wastewater treatment works	1.88	2.46	2.27
18	Ops capital Sewerage	7.28	12.41	11.46
19	Meter installation and maintenance	3.71	2.75	2.54
20	Management and general	10.31	11.47	10.59
23	Minor watermain repairs, requisitions, road schemes and public realm	4.08	7.26	6.70
24	Minor sewer repairs, requisitions, road schemes and public realm	3.32	4.09	3.78
98	Additional Outputs Programme (Enhancement)	10.78	0.00	0.00
99	PC15 balancing line (Base)	1.26	0.00	0.00
Total	Excluding additional outputs	137.56	154.33	142.50
Total	Including additional outputs	148.34	154.33	142.50

Nominated Outputs

Refer to Table 40a and associated commentary for full detail on nominated outputs over Year 1 of the PC15 period.

Water

Scheme	UID Name	BU Date	Quarter claimed
JB693	Carland to Cookstown Trunkmain	21/09/2016	16/17 Q2

Sewerage

Beneficial Use was claimed on twenty six UIDs in total during 2015/16, with nineteen of these UIDs claimed during the Q4 period:

Ref	UID	Scheme	UID Name	Quarter claimed
1	UID032	KS937	Annesborough Park WwPS	16/17 Q1
2	UID069	KT391	Antrim St CSO 25	16/17 Q2
3	UID218	KR480	Palace Barracks CSO 110	16/17 Q2
4	UID273	KL504	Knockalla New WWPS	16/17 Q2
5	UID220	KR640	Strathearn Court CSO 53	16/17 Q3
6	UID005	KF330	The Mall East CSO	16/17 Q3
7	UID432	KL527	Manorwood WWPS	16/17 Q3
8	UID006	KF330	English St CSO. Scheme 2	16/17 Q4
9	UID263	KS877	57 Belfast Road CSO 8C	16/17 Q4
10	UID264	KS877	17 Belfast CSO 8D	16/17 Q4
11	UID388	KA261	Milltown Road WWPS Upgrade	16/17 Q4

Beneficial Use was claimed at the following Wastewater Treatment Works.

Scheme	Site	CAR ID	Quarter claimed
KS389	Blackrock	S00306	16/17 Q3
KI556	The Loup	S01588	16/17 Q4

Beneficial Use was achieved at the following Waste Water Treatment Works from the Rural WwTW Programme.

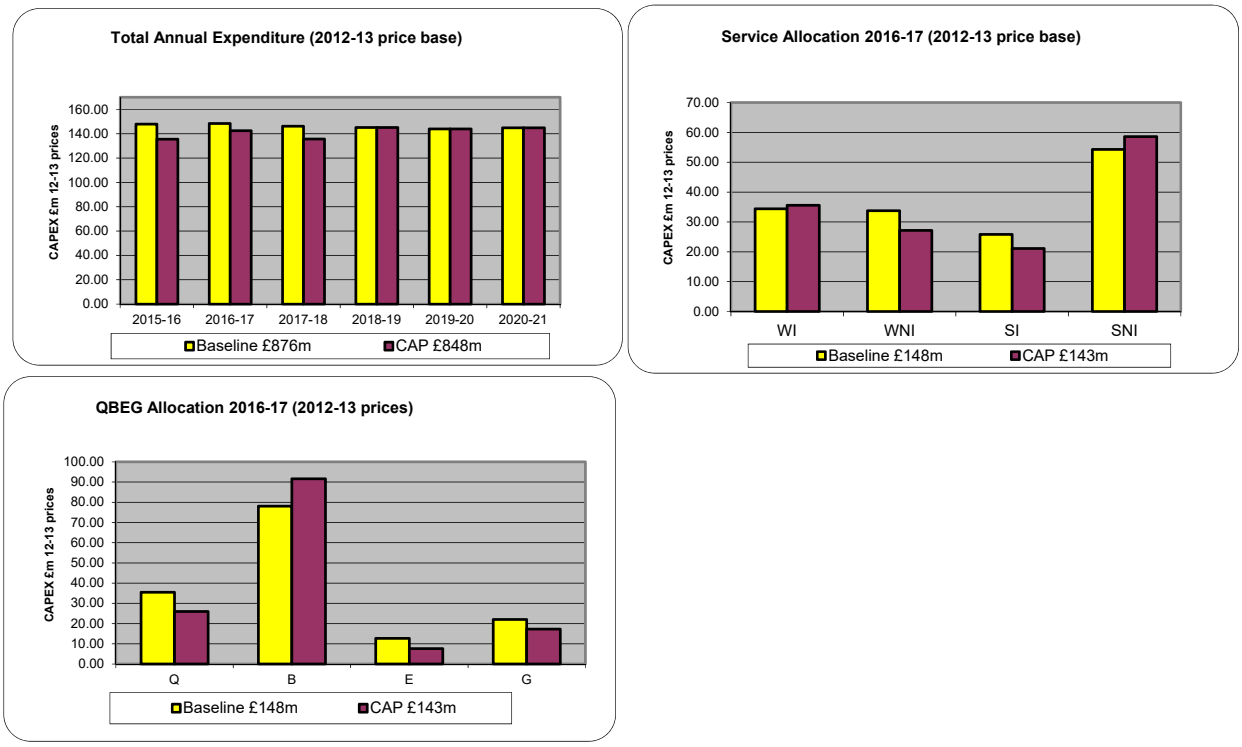
Scheme	Site	CAR ID	Quarter claimed
KI542	Drumlough	S00320	16/17 Q1
KI542	Glenoe WwTW	S01462	16/17 Q2
KI556	Trench Road	S04118	16/17 Q2
KI556	Acton	S02111	16/17 Q2
KI556	McKinley Park	S02276	16/17 Q3
KI556	Longs Glebe	S01160	16/17 Q3
KI556	Kilross	S01622	16/17 Q4
KI556	Milltown (Aghory)	S02593	16/17 Q4

Regulatory Dashboard

Figure 2 is an extract of the Regulatory Dashboard for period to end of March 2016/17. Only graphs that are currently meaningful have been included. 2012/13 prices are used in the graphs and the following is a summary of the main points to note:

- Graph 1: Total Annual Expenditure. The Graph shows a £5.8m reduction in 2016/17 in funding available, having considered RPI impact.
- Graph 2: Service allocation. Service allocation for 2016/17 is currently forecast as well balanced with reductions in Water Non-infrastructure and Sewerage Infrastructure.

Figure 2: 2016-17 Q4 CIM. RPI as per current actual and NI Water projected.



Capital expenditure commentary

This submission is completed primarily using CPMR with full reconciliation completed to ORACLE.

Annex A

1 Purpose and background

This is a report on the capital projects associated with the NI Water Energy Efficiency programme for inclusion in the NI Water Information Return (AIR 17) Chapter 30. This was first requested in 2016 when the UR initially raised three queries as follows:

Energy efficiency and renewable energy schemes

3.13 The commentary should identify the total invested in energy efficiency and renewable energy schemes and the allocation of this investment by purpose.

3.14 The PC15 final determination included funding for a range of energy efficiency and renewable energy schemes proposed by the company intended to contribute cumulative energy reductions of around 12GWhr/ by the end of the PC15 period. This expenditure is spread across a range of investment categories within the capital expenditure tables. The company should summarise progress on delivery of energy efficiency and renewable energy savings through these schemes in a specific section within the consolidated report on capital investment. This should include an estimation of the cumulative energy reductions delivered against PC15 estimates and an explanation of how they have been derived. Explanations for any variance to original delivery plans should be provided.

3.15 In the PC15 final determination we noted that confirmation of the scope, costs and benefits for the sub-meter schemes were subject to the completion of a feasibility study and that NI Water needed to demonstrate that the investment was beneficial and confirm this to the Utility Regulator before embarking on wide spread sub-metering. Progress on this issue should also be addressed in this section of the consolidated report."

2 Reporting requirement 1 and 2

3.13 The commentary should identify the total invested in energy efficiency and renewable energy schemes and the allocation of this investment by purpose.

3.14 The PC15 final determination included funding for a range of energy efficiency and renewable energy schemes proposed by the company intended to contribute cumulative energy reductions of around 12GWhr/ by the end of the PC15 period. This expenditure is spread across a range of investment categories within the capital expenditure tables. The company should summarise progress on delivery of energy efficiency and renewable energy savings through these schemes in a specific section within the consolidated report on capital investment. This should include an estimation of the cumulative energy reductions delivered against PC15 estimates and an explanation of how they have been derived. Explanations for any variance to original delivery plans should be provided.

2.1 NI Water Response

Northern Ireland Water has a dedicated PC15 Energy Efficiency programme, some of which is a continuation of the investments undertaken during PC13. Details of the PC15 investment by purpose are contained in Appendix 1, and Appendix 2. Table 2.1 provides a high-level summary of expenditure profiles:

Capital funding as stated in PC15 DD Response Annex 6 (£k)	PC15 baseline, nominal (£k)	PC15 baseline nominal (£k) Energy Efficiency only	2015/16 investment (£k)	2016/17 investment (£k)	2017/18 Forecast Investment (£k)	Total (£)
9,204	9,024	7.43	0.982	1.54	0.300	2.82

For the first two years, the energy efficiency programme has been managed in five work streams:

- Renewables
- Clean Water
- Wastewater
- PPP
- Negative Opex

Benefits from the energy efficiency and renewable energy schemes are expressed as:

- Reduced Consumption kWh;
- Reduced Rate of electricity (ppu) or
- Increased income either via ROCs or exporting electricity to the grid.

Renewables
Renewable initiatives are split into two main areas:

1. Self-Generation from NI Water Assets
EP017 Renewable Energy
Capital Requested in DD Business Plan: £2.176m
Current Assessment of Funding Required during PC15: £1.229m

Funding available for EP017 was allocated for the purpose of investing in renewable energy during PC15. Within the PC15 Business Plan, NI Water proposed to develop one wind turbine on the site of the North Coast WwTW. The business case for this project was deemed viable as the kWh generation could be consumed within the WwTW (at the North Coast WwTW) and receiving income from the governments Renewable Obligation Certificates (ROCS) incentive scheme. After two unsuccessful planning applications, the majority of the expenditure was allocated into installing Solar Photo Voltaic Systems.

Solar Photo Voltaic
This programme of work has had several major constraints since its inception:

1. Due to the change in government incentives. The timeline for this occurred as follows:
   - Decrease from four Renewables Obligation Certificates (ROCs) to three ROCs (on 1 October 2015 to 31 September 2016);
   - Decreasing further to two ROCs from 1 October 2016 until 31 March 2017 and
   - no ROC's incentives from 1 April 2017;
2. The NIE connection process has caused delay and uncertainty for NI Water in the delivery of the Solar PV programme of work.

NI Water installed approximately 1MW of Solar PV systems during PC15. 52 installations have occurred across NI Waters Asset base (throughout Northern Ireland) during PC15. Yield from these installations is expected to be in the region of 787,964.48kWh per annum and ROC income expected to be in the region of £92K per annum.

Funding for these installations was provided from EP017 (46 sites) and BE017 (6 sites).

JI041 Hydro power from raw water
Capital Requested in DD Business Plan: £0.439m
Current Assessment of Funding required £0.439m (original value used)

Within the PC15 business plan (after a feasibility exercise), ten Hydro Turbines were identified for delivery at eight sites and the UR accepted to grant funding for this initiative in the final determination.

This programme of work however has been impacted by the withdrawal of the incentive scheme from central government on 31 March 2017 and by the NIE connection process.

A further feasibility assessment is underway to re-examine this project to determine viability at approximately five sites taking into account these updated issues.

Five Hydro sites are being considered for viability:

1. Silent Valley: A NIE grid connection is being applied for in 2017 but cannot be progressed further until the outcome is known.
2. Dorisland WTW: An application to connect to the electricity grid was submitted to NIE in 2015 who has since replied to confirm the application will not be assessed until 2018. This cannot be progressed further until a further update is received from NIE.
3. Altnaheglish (Caugh Hill): An application to connect to the electricity grid was submitted to NIE in 2015 who has since replied to confirm the application will not be assessed until 2018. This cannot be progressed further until a further update is received from NIE.
4. and 5. Two existing Hydro electricity generators are being evaluated for refurbishment and the design solutions are underway.

JI040 Recovering Energy from the water distribution System

Capital Requested in DD Business Plan: £1.350m
Current Assessment of Funding Required during PC15: £0.003m

Given the uncertainties around this initiative, NI Water focused on those sites with a relatively attractive payback period. Within our programme in 2015, it was planned to conduct a trial to assess the viability of generating electricity from Pressure Relief Valves in the water network. Due to technical difficulties, withdrawal of the government incentive schemes and NIE connection issues, this project has been withdrawn from our plans.

2. Renewable Generation via Power Purchase Agreements (PPAs)

Within the PC15 Energy Efficiency Programme PPAs have been identified as a credible efficiency measure. Under a PPA, a third party would fund and deliver the solution (e.g. a wind turbine). Current government incentives e.g. Renewables Obligation Certificates (ROCs), make it viable for third party investment in renewable energy solutions which can supply electricity at a rate lower than the grid. It is envisaged NI Water would enter into contracts to purchase the electricity generated at a rate below that available from the main electricity suppliers (from the grid), for a defined period. Such arrangements would contribute to renewable energy targets and should deliver an Opex cost saving over the contract duration. While the policy by central government to change/remove incentives for renewable energy (e.g. ROCs), is likely to impact this potential market, this is still on NI Water plans for proposed renewable generation projects.

Clean Water Initiatives

The Clean Water initiatives identified within NI Waters Energy Efficiency Programme for PC15 are:

JI069 WPS Pump Efficiency

Capital Requested in DD Business Plan: £1.286m (JI069 and JI075 combined)
Current Assessment of Funding Required during PC15: £0.576m

Five WPS have been completed and are realising benefits during 2016/17 and 2017/18. The benefits associated with these upgrades will be reported on when the full realisation period and process has been completed. These sites were funded under JI069.

JI075 - WPS Pump Efficiency

Current Assessment of Funding Required: £0.367m
Phase 2 of this Water Pumping programme is being developed taking into account the learnings of Phase 1 (under JI069) and any further developments in benchmarking and analysis assessments.

JI071 – Electrical Sub-meters (water)

Capital Requested in DD Business Plan: £0.488m
Current Assessment of Funding Required: £0.488m

Sub-metering is seen as an important enabler for energy efficiency. A trial has been conducted at one Water site and one Wastewater site (KI545). NI Water are currently receiving the data from this trial however there needs to be a reasonable period to collect this data to enable trend analysis to be undertaken and evaluated.

JI032 – Buildings, water treatment sites - water regulation compliance & energy efficiency

Capital Requested in DD Business Plan: £0.741m
Current Assessment of Funding Required: £0.098m

The Energy element of the PC15 Business Plan included funding for NI Water to place energy efficiency measures into buildings at its operational sites to improve energy efficiency. This work (mainly heating and lighting type work) is underway and is due to complete in 2017/18, with benefits realisation during 2017/18 and 2018/19. The level of investment and subsequent benefits are anticipated to be lower than the initial business case.

WD083 Seasonal Time of Day (STOD)

Capital Requested in DD Business Plan: £0m
Current Assessment of Funding Required: £0.089m

This programme of work moved consumption from peak consumption to off peak consumption at 17 WPS during 2015/16 and 2016/17. Although the main driver for Time of Day pumping was to reduce the appu (average price per unit of kW) rate (i.e. a £Cash benefit) the analysis from this investment has concluded there has also been some reduced consumption (kWh). This is evident, as a more efficient pumping regime (for these sites) has provided reduced consumption and therefore lower costs. Expenditure during 2015/16 (£59k) and 2016/17 (£30K) on this project produced a cost saving of c. £40k during this same period with further benefits to be realised in 2017/18.

Wastewater Initiatives

KI514 – Buildings, wastewater treatment sites - water reg. compliance & energy efficiency

Capital Requested in DD Business Plan: £0.79m
Current Assessment of Funding Required: £0.162m

The Energy element of the PC15 Business Plan included funding for NI Water to place energy efficiency measures into buildings at its operational sites to improve energy efficiency. This work (mainly heating and lighting type work) is underway and is due to complete in 2017/18, with benefits realisation during 2017/18 and 2018/19. The level of investment and subsequent benefits are anticipated to be lower than the initial business case.

KI517 Energy efficiency at wastewater pumping stations

Capital Requested in DD Business Plan: £0.021m
Current Assessment of Funding Required: £0.003m

Appraisals were performed at wastewater pumping stations to identify where potential energy efficiencies could be delivered. NI Water has assessed the appraisals and concluded that energy efficiency opportunities at these WwPS are not economically viable purely on energy efficiency. NI Water are however looking at other alternatives in regards to energy efficiency measures for pumping in Wastewater.

KI553 - Energy efficiency at wastewater pumping stations

Capital Requested in DD Business Plan: £0m
Current Assessment of Funding Required: £0m

Appraisals were performed at wastewater pumping stations to identify where potential energy efficiencies could be delivered. NI Water has assessed the appraisals and concluded that energy efficiency opportunities at these WwPS are not economically viable purely on energy efficiency. NI Water are however looking at other alternatives in regards to energy efficiency measures for pumping in Wastewater.

KI545 – Electrical Sub-meters (wastewater)

Capital Requested in DD Business Plan: £0.651m
Current Assessment of Funding Required: £0.651m

Sub-metering is seen as an important enabler for energy efficiency. A trial has been conducted at one Water site and one Wastewater site.

NI Water are assessing the information collated and developing the associated dashboards before proceeding with further delivery. Until the outcome of this is concluded the estimates in the original business case is the level of investment estimate used at this stage.

PL005 Process Optimisation of WwTW

Capital Requested in DD Business Plan: £0
Current Assessment of Funding Required: £0.348m

BN048 Process Optimisation of WwTW

Capital Requested in DD Business Plan: £0
Current Assessment of Funding Required: £0.1m

Within the PC15 Energy Efficiency Delivery Programme, under PL005, £240K of Capital has been allocated and within BN048 (a further £100K) to fund a process optimisation project at a number of Waste Water Treatment Works (WwTW) across NI Water. The work optimises energy usage within the wastewater treatment processes and utilises a Programmable Logic Controller (PLC) at each WwTW where the technology is applicable. In general, optimisation modifications have been focused within a number of areas namely the site's capacity, flow/loading, historic energy consumption, process variables (flow management, Dissolved Oxygen (DO), Mixed Liquors (MLSS), RAS, SAS) and regulatory requirements.

This programme of work across circa 40 large WwTW (a combined total) has produced in year consumption reductions of 957,683 kWh in 2015/16 and a further 1,176,603 kWh reduction in 2016/17.

This project is continuing during 2017/18.

PPP

There were two PPP projects being considered under energy efficiency.
The first was investment in a Variable Speed Drive and a pump refurbishment programme with the Alpha contractor. This initiative was considered under NI Water governance and due to the nature of the contract, it was decided that this was not a viable project at this stage.

The second project was with the Omega contractor where control improvements were being considered at Donaghadee Pumping Station, and a number of other locations. This project has been completed and the benefits associated with this project will be realised during 2017/18.

Negative Opex

NI water currently generates revenue from our existing electricity generating assets:

- Raw Water Turbines at Silent Valley and Oaklands
- Sale of ROCs
- Participation in an Aggregated Generation Unit with fixed standby generation
- Exporting electricity to the grid

This revenue is currently considered "unregulated" and was not being treated as "negative Opex" (i.e. efficiency). A review of the approach adopted by some GB water utilities is currently being considered by the UR.

Not Defined as Energy Efficiency Capital

KR627 and KS974 Energy Efficiency to Inlet and Primary Effluent Pumps, Return Activated Sludge Pumps. (Screw Pumps)

Capital Requested in DD Business Plan: £0
Current Assessment of Funding Required: £1.54m

Energy efficiency improvements to screw pumps is a further project identified as a key driver to assist NI Water reduce electricity consumption. NI Water have commenced a programme of work at Screw Pumps to reduce consumption (kWh) at a number of sites. This includes the six Inlet Screw Pumps at Belfast WwTW, the three Pre-Treatment Effluent Screw pumps (PEPs) and the three Return Activated Sludge Pumps (RAS) at Belfast WwTW. The benefits realisation from this work will occur during 2017/18 and

2018/19 and will be carried out with other energy efficiency work within the Process Optimisation project.

Solar Photo Voltaic at Dunore WTW

NI Water are assessing the delivery of a 6.5MW solar farm on land adjacent to Dunore Water Treatment works. Success of this will be dependent on a Business Case outlining the financial benefits, and the associated risk of non-delivery to avail of the grace period for solar incentive time scales.

Additional PC15 Energy Efficiency Projects

Within the Energy Efficiency programme, there are three energy efficiency projects (JI041 Hydro and Sub-metering in Water JI071 and Wastewater KI545) with capital investment estimates against them that are based on the original Business Cases. As indicated, there are delivery risks associated with these projects and this may release capital for other energy efficiency projects. NI Water are currently seeking to identify energy efficiency projects that are viable and are undergoing trials and pilots in several areas. Business Cases will be brought forward seeking capital when the outcome of the trials and pilots are concluded.

3 Reporting requirement 3

3.15 In the PC15 Final Determination we noted that confirmation of the scope, costs and benefits for the sub-meter schemes were subject to the completion of a feasibility study and that NI Water needed to demonstrate that the investment was beneficial and confirm this to the Utility Regulator before embarking on wide spread sub-metering. Progress on this issue should also be addressed in this section of the consolidated report.

3.1 Response

These projects did not include any explicit energy reductions. The purpose of the projects was to establish 'benchmark' measurements to inform further implementation. Pilots have been conducted at two sites - Antrim WwTW (KI545) and Brick Row WPS (JI071).

Due to technical difficulties, the data verification exercise from these pilot sites are still in a stage of development. This exercise is being undertaken to ensure the data is reliable. IT architecture systems have had to be developed and to minimise cost, NI Water in-house IT section are developing this.

A wider rollout plan is on hold pending the outcome of building trends (from the data), buy in from operational employees and verification of the data from these pilot sites. Consultation with external stakeholders and development of business cases will be compiled on completion of these earlier stages.

4 Conclusion

The PC15 energy efficiency programme was estimated to require c£9.0m of capital investment (nominal terms) in the draft determination. In the previous response in 2016, NI Water outlined that the water regulations compliance elements of the clean and wastewater (“Buildings, water treatment sites - water regulation compliance & energy efficiency”) projects were excluded, the baseline requirements for the programme is reduced to £7.43m for energy efficiency.

NI Water has invested £0.98m in 2015/16 and £1.54m in 2016/17 (£2.52m total) and are seeing encouraging results on these investments. Overall electricity consumption within NI

Water has out turned at a significantly reduced figure of 283GW in 2016/17 (from 294GW in 12/13. The energy efficiency programme during PC13 and PC15 has been a major contributor to enable NI Water achieve this.

Up to 31 March 2017, the benefits summary from the energy efficiency projects invested in during PC15 are as follows:

Energy reduction (GWh/a)	**15-16**	**16-17**	**Totals**
From Renewables	0.01	0.3	0.31
From Energy efficiency	0.96	1.4	2.36
Total	0.97	1.7	2.7

5 Next steps & actions

The PC15 energy Efficiency Programme has been impacted by NIE networks connection process and central government policy to change/remove incentives for renewable energy generation (e.g. ROCs). While these issues impacted the programme, NI Water has and is pro-actively seeking other alternatives for energy efficiency initiatives.

Work is ongoing on more detailed appraisals, performing trials, evaluation of the trials and producing robust business cases for a number of energy efficiency initiatives. NI Water continues to request that these outputs are not nominated, as this will allow us to implement these initiatives and deliver projects, which are assessed to provide the most beneficial solutions.

Appendix 1 - Detailed list of investment in energy efficiency and renewable energy schemes and the allocation of this investment by purpose

Type of project	Project code	Project title	Capital funding as requested in DD PC15 BP (£m)	Current assessment of funding required (£m)	Included in Annex 6 baseline?	Note	Q	B	E	G
Renewable	JI040	Recovering energy within the water distribution system	1.350	0.003	Y	The viability of this initiative was dependent on obtaining ROCs, with only 4 sites viable for ROCs. Updated profile reflects current expenditure incurred.	0	0	0	0
Renewable	JI041	Hydro power from raw water	0.439	0.439	Y	The viability of delivering all of the 10 Hydro Turbines were dependent on obtaining ROCs. 5 Hydro sites are now being considered for viability.	0	0	100	0
Renewable	EP017	Electricity generation from wind power or alternative green energy solution	2.176	1.229	Y	46 sites were completed before the 3 ROCs deadline of 30 Sept 16. Further extensions at Westland and New Holland WwTW also occurred in March 17 before the 2 ROCs deadline.	0	0	100	0
Renewable	BE017	Energy M&G	0.000	0.209	N	6 installations completed under this investment (before ROCs deadline)	0	55	45	0
Cleanwater	JI032	Buildings, water treatment sites - water regulation compliance & energy efficiency	1.822	N/A	Y	Combined total of Water Regulation element and energy efficiency	59	40	0	0
Cleanwater	JI032	Water regulation compliance	1.081	N/A	Y	The Water Regulation element of this project can be considered distinct from the Energy element. The baseline has been split based on an assessment of the business case.	100	0	0	0

Type of project	Project code	Project title	Capital funding as requested in DD PC15 BP (£m)	Current assessment of funding required (£m)	Included in Annex 6 baseline?	Note	Q	B	E	G
Cleanwater	JI032	Energy efficiency	0.741	0.098	Y	NIW has commenced with this project: Initial business case appears to have over-estimated the level of investment and benefits. NI Water has proceeded with caution, a reduced scope and therefore a reduced investment is envisaged.	0	100	0	0
Cleanwater	JI069	WPS Pump Efficiency Capital Investment Phase 1	1.286	0.576	Y	This project has completed with benefits realisation in 16/17 and 17/18.	0	100	0	0
Cleanwater	JI075	WPS Pump Efficiency Capital Investment Phase 2	0.000	0.367	Y	NI Water are taking time to take stock of the output of JI069 and WPS analysis before proceeding with phase 2.	0	100	0	0
Cleanwater	JI071	Electrical Sub-meters (water)	0.488	0.488	Y	Spend profile broadly tracking PC15 baseline, but final form of delivery will depend on outcome of trends from data and success of data verification.	0	0	100	0
Cleanwater	WD083	Time of day pumping	0.000	0.089	N	Time of Day pumping was not included in the PC15 baseline. While not delivering any reductions in kWh, it does deliver more efficient pumping practices and reduce overall costs.				
Wastewater	KI514	Buildings, wastewater treatment sites - water reg. compliance & energy efficiency	0.790	N/A	Y		65	35	0	0

Type of project	Project code	Project title	Capital funding as requested in DD PC15 BP (£m)	Current assessment of funding required (£m)	Included in Annex 6 baseline?	Note	Q	B	E	G
Wastewater	KI514	Water regulation compliance	0.514	N/A	Y	The Water Regulation element of this project can be considered distinct from the Energy element. The baseline has been split based on an assessment of the business case.	100	0	0	0
Wastewater	KI514	Energy efficiency	0.277	0.162	Y	NIW has commenced with this project and is due to be completed in 2017/18. Initial business case appears to have over-estimated the level of investment and benefits.NI Water have proceeded with caution, reduced scope and therefore reduced investment required.	0	100	0	0
Wastewater	KI517	Appraisal of Energy Efficiency at Waste Water Pumping Stations	0.021	0.003	Y		0	100	0	0
Wastewater	KI553	Energy efficiency at wastewater pumping stations	0.000	0.000	Y		0	100	0	0
Wastewater	KI545	Electrical Sub-meters (wastewater)	0.651	0.651	Y	Spend profile broadly tracking PC15 baseline, but final form of delivery will depend on outcome of outcome of trends from data and success of data verification.	0	0	100	0
Wastewater	PL005	Energy Efficiency - Process Optimisation	0.000	0.348	N	Although not included in the scope of energy projects identified in Annex 6, this is a valuable project, which has successfully delivered during 2015/16, and 16/17.	0	55	45	0
		Additional PC15 projects	0.000	2.67	N	Additional scope to be defined				
Total			**9.025**	**7.43**						

Appendix 2 – Energy related capital expenditure YTD

Type of project	Project code	Project title	15/16 expenditure, nominal (£m)	16/17 expenditure, nominal (£m)
Renewable	JI040	Recovering energy within the water distribution system	0.003	0.000
Renewable	JI041	Hydro power from raw water	0.009	0.00
Renewable	EP017	Electricity generation from wind power or alternative green energy solution	0.003	1.173
Renewable	BE017	Energy M&G	0.197	0.012
Cleanwater	JI032	Buildings, water treatment sites - water regulation compliance & energy efficiency	0.022	0.028
Cleanwater	JI032	Water regulation compliance	0.000	0.000
Cleanwater	JI032	Energy efficiency	0.000	0.000
Cleanwater	JI069	WPS Pump Efficiency Capital Investment Phase 1	0.432	0.064
Cleanwater	JI075	WPS Pump Efficiency Capital Investment Phase 2	0.037	0.000
Cleanwater	JI071	Electrical Sub-meters (water)	0.007	0.000
Cleanwater	WD083	Time of day pumping	0.059	0.030
Wastewater	KI514	Buildings, wastewater treatment sites - water reg. compliance & energy efficiency		
Wastewater	KI514	Water regulation compliance	0.000	0.000
Wastewater	KI514	Energy efficiency	0.023	0.061
Wastewater	KI517	Appraisal of Energy Efficiency at Waste Water Pumping Stations	0.003	0.000
Wastewater	KI553	Energy efficiency at wastewater pumping stations	0.000	0.000
Wastewater	KI545	Electrical Sub-meters (wastewater)	0.011	0.000
Wastewater	PL005	Energy Efficiency - Process Optimisation	0.176	0.072
Wastewater	BN048	Energy Efficiency - Process Optimisation	0.000	0.100
Total			**0.982**	**1.54**

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 32 FINANCIAL MEASURES

ANALYSIS OF FIXED ASSET ADDITIONS AND ASSET MAINTENANCE BY ASSET TYPE (CURRENT COST ACCOUNTING) (NIW Only)

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7
				WATER SERVICE			SEWERAGE SERVICE			
				INFRASTRUCTURE ASSETS	NON-INFRASTRUCTURE ASSETS	SUBTOTAL	INFRASTRUCTURE ASSETS	NON-INFRASTRUCTURE ASSETS	SUBTOTAL	TOTAL
A	NIW ADDITIONS -NEW ASSETS (ENHANCEMENT)									
1	Water resource facilities	£m	3	0.133	0.287	0.420				0.420
2	Water treatment works	£m	3		0.588	0.588				0.588
3	Water distribution mains	£m	3	17.327	0.150	17.477				17.477
4	Service reservoirs and water towers	£m	3		2.843	2.843				2.843
5	Pumping stations	£m	3		0.532	0.532				0.532
6	Water management and general	£m	3	0.494	2.392	2.885				2.885
7	Sewerage	£m	3				42.433	0.398	42.831	42 831
8	Sea outfalls and headworks	£m	3				0.397	0.000	0.397	0.397
9	Sewage treatment works	£m	3					8.366	8.366	8.366
10	Sludge treatment works	£m	3					0.453	0.453	0.453
11	Sludge disposal	£m	3				0.000	0.000	0.000	0.000
12	In-line pumping stations	£m	3					6.989	6.989	6.989
13	Terminal pumping stations	£m	3					1.139	1.139	1.139
14	Sewerage management and general	£m	3				0.900	0.866	1.766	1.766
15	Total infrastructure additions (Enhancement)	£m	3	17.954		17.954	43.730		43.730	61.684
16	Total non-infrastructure additions (Enhancement)	£m	3		6.792	6.792		18.211	18.211	25 003
17	Total additions (Enhancement)	£m	3	17.954	6.792	24.746	43.730	18.211	61 941	86.686
B	NIW BASE SERVICE PROVISION									
18	Water resource facilities	£m	3	2.263	0.371	2.633				2.633
19	Water treatment works	£m	3		9.179	9.179				9.179
20	Water distribution mains	£m	3	15.949	3.735	19.684				19.684
21	Service reservoirs and water towers	£m	3		4.315	4.315				4.315
22	Pumping stations	£m	3		1.051	1.051				1.051
23	Water management and general	£m	3	1.218	4.892	6.110				6.110
24	Sewerage	£m	3				9.854	0.082	9.936	9 936
25	Sea outfalls and headworks	£m	3				0.003	0.059	0.062	0 062
26	Sewage treatment works	£m	3					32.260	32 260	32 260
27	Sludge treatment works	£m	3					0.071	0.071	0 071
28	Sludge disposal	£m	3				0.000	0.000	0.000	0 000
29	In-line pumping stations	£m	3					9.693	9.693	9.693
30	Terminal pumping stations	£m	3					1.037	1.037	1 037
31	Sewerage management and general	£m	3				0.577	3.046	3.623	3.623
32	Total infrastructure renewals (Base)	£m	3	19.430		19.430	10.434		10.434	29 864
33	Total non-infrastructure expenditure (Base)	£m	3		23.543	23.543		46.247	46 247	69.790
34	Total expenditure (Base service provision)	£m	3	19.430	23.543	42.973	10.434	46.247	56.681	99.654

Table 32 – Analysis of Fixed Asset Additions and Asset Maintenance by Asset Type (Current Cost Accounting)

Refer to Chapter 30 for detailed commentary on this table. There are no reconciling items to report.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 33 FINANCIAL MEASURES (CURRENT COST ACCOUNTING
DEPRECIATION CHARGE BY ASSET TYPE (NIW Only

	DESCRIPTION	UNITS	DP	1	2	3	4	5		6	7	8	9	10	11	12	13	14		15	16	17	18	19	20	21	22	23		24	25	26	27
				Water Service										Sewerage Service										Total									
				2012-13	2013-14	2014-15	2015-16	2016-17	CG	2017-18	2018-19	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	CG	2017-18	2018-19	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	CG	2017-18	2018-19	2019-20	2020-21
A	DEPRECIATION CHARGE FOR THE YEAR																																
1	CCD as at 31 March of the year	£m	3	80.086	47.905	33.476	38.517		B3					66.802	83.520	66.627	67.861		B3					146.888	131.425	100.103	106.378		B3				
2	CCD on additions (enhancement assets) post 1 April 2014	£m	3					0.071	B3									0.255	B3									0.326	B3				
3	CCD on additions (MNI assets) post 1 April 2014	£m	3					0.889	B3									1.073	B3									1.962	B3				
4	Total depreciation charge for the year	£m	3					0.960	B3									1.328	B3									2.288	B3				
5	Total depreciation charged	£m	3	80.086	47.905	33.476	38.517	40.984	B3					66.802	83.520	66.627	67.861	65.539	B3					146.888	131.425	100.103	106.378	106.523	B3				

	DESCRIPTION	UNITS	DP	1	2	3	4	5		6	7	8	9	10	11	12	13	14		15	16	17	18	19	20	21	22	23		24	25	26	27
				Water Service										Sewerage Service										Total									
				Actual 2012-13	Actual 2013-14	Actual 2014-15	Actual 2015-16	Actual 2016-17	CG	Actual 2017-18	Actual 2018-19	Actual 2019-20	Actual 2020-21	Actual 2012-13	Actual 2013-14	Actual 2014-15	Actual 2015-16	Actual 2016-17	CG	Actual 2017-18	Actual 2018-19	Actual 2019-20	Actual 2020-21	Actual 2012-13	Actual 2013-14	Actual 2014-15	Actual 2015-16	Actual 2016-17	CG	Actual 2017-18	Actual 2018-19	Actual 2019-20	Actual 2020-21
B	EXPENDITURE AND PROVISION																																
6	Infrastructure renewals expenditure	£m	3	22.593	22.391	23.055	11.134	19.497	B2					8.775	7.727	8.502	9.010	10.434	B2					31.368	30.118	31.557	20.144	29.931	B2				
7	Infrastructure renewals charges	£m	3	19.902	23.935	22.488	14.410	10.253	C5					10.859	9.474	9.821	10.876	14.755	C5					30.761	33.409	32.309	25.286	25.008	C5				
8	Infrastructure renewals prepayment/ (accrual)	£m	3	12.134	10.590	11.157	7.881	17.125	C5					-10.312	-12.059	-13.378	-15.244	-19.565	C5					1.822	-1.469	-2.221	-7.363	-2.440	C5				

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 33 FINANCIAL MEASURES (CURRENT COST ACCOUNTING
DEPRECIATION CHARGE BY ASSET TYPE (PPP Only)

				1	2	3	4	5		6	7	8	9	10	11	12	13	14		15	16	17	18	19	20	21	21	22		24	25	26	27
	DESCRIPTION	UNITS	DP	Water Service										Sewerage Service										Total									
				2012-13	2013-14	2014-15	2015-16	2016-17	CG	2017-18	2018-19	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	CG	2017-18	2018-19	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	CG	2017-18	2018-19	2019-20	2020-21
A	DEPRECIATION CHARGE FOR THE YEAR																																
1	CCD as at 31 March of the year	£m	3	4.007	4.033	4.082	4.146		B3					0.000	0.000	0.000	0.000		B3					4.007	4.033	4.082	4.146		B3				
2	CCD on additions (enhancement assets) post 1 April 2014	£m	3					0.000	B3									0.000	B3									0.000	B3				
3	CCD on additions (MNI assets) post 1 April 2014	£m	3					0.058	B3									0.000	B3									0.058	B3				
4	Total depreciation charge for the year	£m	3					0.058	B3									0.000	B3									0.058	B3				
5	Total depreciation charged	£m	3	4.007	4.033	4.082	4.146	4.331	B3					0.000	0.000	0.000	0.000	0.000	B3					4.007	4.033	4.082	4.146	4.331	B3				

				1	2	3	4	5		6	7	8	9	10	11	12	13	14		15	16	17	18	19	20	21	21	22		24	25	26	27
	DESCRIPTION	UNITS	DP	Water Service										Sewerage Service										Total									
				Actual 2012-13	Actual 2013-14	Actual 2014-15	Actual 2015-16	Actual 2016-17	CG	Actual 2017-18	Actual 2018-19	Actual 2019-20	Actual 2020-21	Actual 2012-13	Actual 2013-14	Actual 2014-15	Actual 2015-16	Actual 2016-17	CG	Actual 2017-18	Actual 2018-19	Actual 2019-20	Actual 2020-21	Actual 2012-13	Actual 2013-14	Actual 2014-15	Actual 2015-16	Actual 2016-17	CG	Actual 2017-18	Actual 2018-19	Actual 2019-20	Actual 2020-21
B	EXPENDITURE AND PROVISION																																
6	Infrastructure renewals expenditure	£m	3	0.000	0.000	0.000	0.000	0.000	B2					0.000	0.000	0.000	0.000	0.000	B2					0.000	0.000	0.000	0.000	0.00	B2				
7	Infrastructure renewals charges	£m	3	0.000	0.000	0.000	0.000	0.000	C5					0.000	0.000	0.000	0.000	0.000	C5					0.000	0.000	0.000	0.000	0.00	C5				
8	Infrastructure renewals prepayment/ (accrual)	£m	3	1.519	1.519	1.519	1.519	1.519	C5					0.000	0.000	0.000	0.000	0.000	C5					1.519	1.519	1.519	1.519	1.519	C5				

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 33 FINANCIAL MEASURES (CURRENT COST ACCOUNTING
DEPRECIATION CHARGE BY ASSET TYPE (Total)

	DESCRIPTION	UNITS	DP	1	2	3	4	5		6	7	8	9	10	11	12	13	14		15	16	17	18	19	20	21	22	23		24	25	26	27
				Water Service										Sewerage Service										Total									
				2012-13	2013-14	2014-15	2015-16	2016-17	CG	2017-18	2018-19	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	CG	2017-18	2018-19	2019-20	2020-21	2012-13	2013-14	2014-15	2015-16	2016-17	CG	2017-18	2018-19	2019-20	2020-21
A	DEPRECIATION CHARGE FOR THE YEAR																																
1	CCD as at 31 March of the year	£m	3	84.093	51.938	37.558	42.663		B3					66.802	83.520	66.627	67.861		B3					150.895	135.458	104.185	110.524		B3				
2	CCD on additions (enhancement assets) post 1 April 2014	£m	3					0.071	B3									0.255	B3									0.326	B3				
3	CCD on additions (MNI assets) post 1 April 2014	£m	3					0.947	B3									1.073	B3									2.020	B3				
4	Total depreciation charge for the year	£m	3					1.018	B3									1.328	B3									2.346	B3				
5	Total depreciation charged	£m	3	84.093	81.938	37.558	42.663	45.315	B3					66.802	83.520	66.627	67.861	65.539	B3					150.895	135.458	104.185	110.524	110.854	B3				

	DESCRIPTION	UNITS	DP	1	2	3	4	5		6	7	8	9	10	11	12	13	14		15	16	17	18	19	20	21	22	23		24	25	26	27
				Water Service										Sewerage Service										Total									
				Actual 2012-13	Actual 2013-14	Actual 2014-15	Actual 2015-16	Actual 2016-17	CG	Actual 2017-18	Actual 2018-19	Actual 2019-20	Actual 2020-21	Actual 2012-13	Actual 2013-14	Actual 2014-15	Actual 2015-16	Actual 2016-17	CG	Actual 2017-18	Actual 2018-19	Actual 2019-20	Actual 2020-21	Actual 2012-13	Actual 2013-14	Actual 2014-15	Actual 2015-16	Actual 2016-17	CG	Actual 2017-18	Actual 2018-19	Actual 2019-20	Actual 2020-21
B	EXPENDITURE AND PROVISION																																
6	Infrastructure renewals expenditure	£m	3	22.593	22.391	23.055	11.134	19.497	B2					8.775	7.727	8.502	9.010	10.434	B2					31.368	30.118	31.557	20.144	29.931	B2				
7	Infrastructure renewals charges	£m	3	19.902	23.935	22.488	14.410	10.253	C5					10.859	9.474	9.821	10.876	14.755	C5					30.761	33.409	32.309	25.286	25.008	C5				
8	Infrastructure renewals prepayment/ (accrual)	£m	3	13.653	12.109	12.676	9.400	18.644	C5					-10.321	-12.059	-13.378	-15.244	-19.565	C5					3.341	0.050	-0.702	-5.844	-0.921	C5				

Table 33 – Depreciation Charge by Asset Type & Infrastructure Renewals Charge

Current Cost Depreciation (CCD) Charge

The depreciation charge for the year has been populated using the same methodology used to populate Table 25. Current cost depreciation was calculated using the Fixed Asset Register (Real Asset Management). The Fixed Asset Register holds two sets of books (HCA and CCA books) which calculate depreciation using different gross book value (GBV) and gross current replacement cost (GCRC) figures. The CCA books have been used for both Table 25 and Table 33.

The final depreciation report from the CCA book was then analysed to each of their respective asset categories and service activities to identify the water and sewerage services. The management and general service activity could not be readily identified as water and sewerage services and have used the following percentages split as per IFM: Water 41% and Sewerage 59%.

The table has been populated using actual depreciation figures for each financial year contained in the relevant Regulatory Accounts.

With respect to Confidence Grades, this is reported as B3. This is applied given the close link with the CIDA allocations data source, which has been reported as B3 in the capital expenditure tables 35 and 36.

Assets to be decommissioned or written off resulted in accelerated depreciation in the year. Assets with a NCRC of £9,705,705.49 were decommissioned in 2016/2017 – the corresponding accelerated depreciation is included in Table 33.

There are three main PPP Projects – Alpha, Omega and Kinnegar. When these projects were established, each was examined to determine whether the risks and rewards were transferred to the provider or remained with NIW. Findings are as follows:

> *Alpha Project* - for Alpha it was determined that the risks and rewards remained with NIW and therefore the assets were owned by the company and should be capitalised and depreciated. An associated finance lease should also be established with an initial liability equivalent to the value of the assets capitalised.
>
> *Omega and Kinnegar Projects* – it was determined that in both cases the risks and rewards were transferred to the operator and thus the assets would not be capitalised and all charges would be debited to the P&L as incurred. However, an element of these charges would be credited from P&L to Balance Sheet to establish a residual interest asset since ultimately the assets would come back into NIW ownership and would have a residual value at this time. These residual assets would not be depreciated during the life of the contracts.

Depreciation for the year in relation to the PPP Alpha Project (which is on balance sheet) was [redacted] for 2016/17 (2015/16: [redacted]. This is shown separately in the second table for PPP only.

The asset lives used in calculating depreciation are consistent with those that have been used to populate Table 34. The asset lives used to calculate depreciation in the Fixed Asset Register are the same in both the HCA and CCA books.

Table 33 has also been adjusted to include only the appointed business and exclude the unappointed business relating to vehicle maintenance carried out for third parties. The depreciation charge (£144k) relating to this has been adjusted through Water Services – CCD on MNI assets. This is the only adjustment made in populating Table 33.

There are some limitations to the CCD process namely it was based on the last asset management plan (AMP) survey of existing assets as at 1 September 2001. The Utility Regulator has concluded that there is no material benefit in asking NIW to prepare a Modern Equivalent Asset Valuation (MEAV) in the first three years of PC15.

There were no MEA revaluations during the year and therefore no impact on CCD charge in the year.

During the year, decommissioned assets with a net current replacement cost (NCRC) of £9,705,705.49 were included within the current year depreciation charge.

	Water (16/17)	**Sewerage (16/17)**	**Total (16/17)**
CC Depreciation in year	£38,952,282.47	£62,195,547.75	£101,147,830.22
Accelerated Depreciation	£6,362,273	£3,343,432.49	£9,705,705.49
Total (2016/2017)	£45,314,555.47	£65,538,980.24	£110,853,535.71

	Water (15/16)	**Sewerage (15/16)**	**Total (15/16)**
CC Depreciation in year	£38,830,749.30	£62,699,412.04	£101,530,161.34
Accelerated Depreciation	£3,343,206.93	£5,097,435.14	£8,440,642.07
Impairment 15/16	£488,948.55	£63,294.60	£552,243.15
Total (2015/2016)	£42,662,904.78	£67,860,141.78	£110,523,046.56

The total depreciation charge for 16/17 (£110,854k) is £331k higher than 15/16 (£110,523k). Normal decommissioning in the course of the business amounted to £9.7m for the year, compared to £8.4m in 2015/16. Also, 16/17 included a full year's depreciation [redacted] of the Alpha PPP asset, which was [redacted] higher than the previous year.

Infrastructure Renewals accounting

The IRC calculation for 16/17 is based on the final determination arising from PC15. The Regulator determined that the IRC and IRE will be the same for the six year period of PC15. The projected IRE forms part of the PC15 capital expenditure plans.
The difference between the actual out-turn IRE and the IRC is treated as an accrual or prepayment.

2016-2017 IRC

The IRC for 2016-17 based on PC15 can be summarised as follows:

Water - £10.253m
Sewerage - £14.755m
Total - £25.008m

The out-turn IRE for 2016-2017 can be shown as follows:

Water - £19.497m
Sewerage - £10.434m
Total - £29.931m

The accrual at 31 March 2017 can be shown as follows:

	W TOTAL £m	S TOTAL £m	Total TOTAL £m
IRE	19.497	10.434	29.931
IRC	(10.253)	(14.755)	(25.008)
In year (accrual)	9.244	(4.321)	4.923
c/f prepayment / (accrual)	9.400	(15.244)	(5.844)
Cumulative prepayment / (accrual)	18.644	(19.565)	(0.921)

At the end of the year to 31 March 2017, an accrual balance of £0.921m was evident. This balance arose as the in-year prepayment of £4.923m for 2016-17 was added to the cumulative brought forward accrual balance of £5.844m, which existed at 31st March 2016.

In line with the underlying principles of infrastructure renewals accounting it is anticipated that the cumulative level of IRE and IRC should broadly match over the longer term. The water prepayment and sewerage accrual at 31st March 2017 will be monitored to ensure that the level of IRC charged in the future to the profit and loss account is appropriate given actual levels of IRE.

PPP

Alpha PPP has not given rise to any IRE for this year and therefore no IRC has been allocated to the PPP services.

The Statutory accounts are prepared under IFRS and infrastructure renewals accounting is not applied. Infrastructure depreciation is charged in the statutory accounts and the value of this differs from the IRC in the regulatory accounts.

NORTHERN IRELAND WATER LIMITED ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN TABLE 34 FINANCIAL MEASURES (CURRENT COST ACCOUNTING)
ANALYSIS OF NON INFRASTRUCTURE FIXED ASSET ADDITIONS BY LIFE CATEGORIES NI WATER ONLY

				1	2	3	4	5		6	7	8	9	10	11	12	13	14		15	16	17	18
	DESCRIPTION	UNITS	DP	Water Service										Sewerage Service									
				2012 13	2013 14	2014 15	2015 16	2016 17	CG	2017 18	2018 19	2019 20	2020 21	2012 13	2013 14	2014 15	2015 16	2016 17	CG	2017 18	2018 19	2019 20	2020 21
A	ACCOUNTING FIXED ASSET ADDITIONS NON INFRASTRUCTURE ASSET ADDITIONS (ENHANCEMENT) BY ASSET LIFE																						
1	Very Short	£m	3	0.108	0.702	0.135	0.077	0.199	B3					-0.005	0.473	0.088	0.071	0.156	B3				
2	Short	£m	3	2.457	3.136	2.779	1.154	2.954	B2					3.923	3.506	4.763	4.272	1.908	B2				
3	Medium	£m	3	2.610	2.425	7.433	2.279	1.536	B2					10.142	9.775	9.873	4.251	6.604	B2				
4	Medium long	£m	3	0.000	0.383	0.014	0.000	0.000	B2					0.000	0.000	0.010	0.002	0.001	B2				
5	Long	£m	3	2.640	1.566	4.926	2.715	2.094	B2					14.217	13.256	10.907	6.455	9.202	B2				
6	Land	£m	3	0.000	0.000	0.007	0.000	0.009	B2					0.102	0.050	0.021	0.261	0.340	B2				
7	Land Disposals	£m	3	-0.111	-0.351	-0.066	-0.164	-0.166	B2					-0.160	-0.190	-0.079	-0.251	-0.120	B2				
8	Total	£m	3	7.704	7.861	15.229	6.061	6.626	B2					28.219	26.870	25.583	15.060	18.091	B2				
B	NON INFRASTRUCTURE ASSET ADDITIONS (BASE SERVICE) BY ASSET LIFE																						
9	Very Short	£m	3	2.119	1.948	0.950	1.705	2.044	B3					1.916	1.886	2.390	0.811	1.780	B3				
10	Short	£m	3	3.285	5.839	3.416	4.524	4.585	B2					4.859	6.151	5.762	4.545	4.560	B2				
11	Medium	£m	3	6.817	3.874	7.652	10.926	12.066	B2					24.145	30.514	14.642	22.828	25.713	B2				
12	Medium long	£m	3	0.000	0.134	0.506	0.380	0.481	B2					0.000	0.250	0.137	0.092	0.164	B2				
13	Long	£m	3	3.688	5.029	5.366	5.701	4.368	B2					10.338	12.185	7.153	14.523	14.031	B2				
14	Total	£m	3	15.909	16.825	17.891	23.235	23.543	B2					41.258	50.986	30.084	42.799	46.247	B2				
C	NON INFRASTRUCTURE ADDITIONS AVERAGE LIFE (YEARS)																						
15	Very Short	years	0																				
16	Short	years	0																				
17	Medium	years	0																				
18	Medium long	years	0																				
19	Long	years	0																				

NORTHERN IRELAND WATER LIMITED ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN TABLE 34 FINANCIAL MEASURES (CURRENT COST ACCOUNTING)
ANALYSIS OF NON INFRASTRUCTURE FIXED ASSET ADDITIONS BY LIFE CATEGORIES PPP

	DESCRIPTION	UNITS	DP	1	2	3	4	5		6	7	8	9
				Water Service									
				2012 13	2013 14	2014 15	2015 16	2016 17	CG	2017 18	2018 19	2019 20	2020 21
A	ACCOUNTING FIXED ASSET ADDITIONS NON INFRASTRUCTURE ASSET ADDITIONS (ENHANCEMENT) BY ASSET LIFE												
1	Very Short	£m	3	0.000	0.000	0.000	0.000	0.000	n/a				
2	Short	£m	3	0.000	0.000	0.000	0.000	0.000	n/a				
3	Medium	£m	3	0.000	0.000	0.000	0.000	0.000	n/a				
4	Medium long	£m	3	0.000	0.000	0.000	0.000	0.000	n/a				
5	Long	£m	3	0.000	0.000	0.000	0.000	0.000	n/a				
6	Land	£m	3	0.000	0.000	0.000	0.000	0.000	n/a				
7	Land Disposals	£m	3	0.000	0.000	0.000	0.000	0.000	n/a				
8	Total	£m	3	0.000	0.000	0.000	0.000	0.000	n/a				
B	NON INFRASTRUCTURE ASSET ADDITIONS (BASE SERVICE) BY ASSET LIFE												
9	Very Short	£m	3						n/a				
10	Short	£m	3						n/a				
11	Medium	£m	3						B3				
12	Medium long	£m	3						n/a				
13	Long	£m	3						B3				
14	Total	£m	3						B3				
C	NON INFRASTRUCTURE ADDITIONS AVERAGE LIFE (YEARS)												
15	Very Short	years	0										
16	Short	years	0										
17	Medium	years	0										
18	Medium long	years	0										
19	Long	years	0										

	DESCRIPTION	UNITS	DP	10	11	12	13	14		15	16	17	18
				Sewerage Service									
				2012 13	2013 14	2014 15	2015 16	2016 17	CG	2017 18	2018 19	2019 20	2020 21
A	ACCOUNTING FIXED ASSET ADDITIONS NON INFRASTRUCTURE ASSET ADDITIONS (ENHANCEMENT) BY ASSET LIFE												
1	Very Short	£m	3	0.000	0.000	0.000	0.000	0.000	n/a				
2	Short	£m	3	0.000	0.000	0.000	0.000	0.000	n/a				
3	Medium	£m	3	0.000	0.000	0.000	0.000	0.000	n/a				
4	Medium long	£m	3	0.000	0.000	0.000	0.000	0.000	n/a				
5	Long	£m	3	0.000	0.000	0.000	0.000	0.000	n/a				
6	Land	£m	3	0.000	0.000	0.000	0.000	0.000	n/a				
7	Land Disposals	£m	3	0.000	0.000	0.000	0.000	0.000	n/a				
8	Total	£m	3	0.000	0.000	0.000	0.000	0.000	n/a				
B	NON INFRASTRUCTURE ASSET ADDITIONS (BASE SERVICE) BY ASSET LIFE												
9	Very Short	£m	3						n/a				
10	Short	£m	3						n/a				
11	Medium	£m	3						n/a				
12	Medium long	£m	3						n/a				
13	Long	£m	3						n/a				
14	Total	£m	3						n/a				
C	NON INFRASTRUCTURE ADDITIONS AVERAGE LIFE (YEARS)												
15	Very Short	years	0										
16	Short	years	0										
17	Medium	years	0										
18	Medium long	years	0										
19	Long	years	0										

Table 34 – Financial Measures (Current Cost Accounting) - Analysis of Non-Infrastructure Fixed Asset Additions by Life Categories

Commentary and methodology

All the capital expenditure tables have been populated using project data extracted from the company's core project control system (CPMR), as well as ORACLE (Financial management system).

Internal training and mentoring has been ongoing with key staff mainly with Engineering Procurement, Operations, Asset Management, PPP and Finance and Regulation directorates. This training has been delivered to external consultants where requested each year since 2010/11. Further training will be provided in future to provide refresher training for existing staff.

Methodology NIW Table

Capital expenditure is analysed in 3 separate streams as follows:

a) Capital Works Programme delivered by Engineering Procurement Directorate
b) Operations Capital
c) Management & General (M & G).

The methodology is explained in detail under these 3 areas as follows.

Capital works programme

Capital investment driver allocation (CIDA) processes have continued as per previous years.

a) CAPTRAX – CAPTRAX continues to be reconciled on a monthly basis with ORACLE so the final reports can be run directly from CAPTRAX. Two CIDA reports are generated from CAPTRAX as follows:
    - CIDA non-lands – This reports the accrual in 2016/17 against each project, excluding land acquisition, with a full CIDA output.
    - CIDA lands – This reports the accrual in 2016/17 against land acquisition and the associated CIDA output.
b) CWP AIR reporting Model – The model developed in Excel for AIR09 and subsequent years has been adopted for AIR17 reporting. The model takes the outputs from the above reports from CAPTRAX and completes the tables 32, 34, & 36, 36a with the CWP element of Capital expenditure.

Costs are apportioned between infrastructure and non-infrastructure according to the process outlined in the CIDA manual.

NI Water continually review their existing processes regarding the application of CIDA and seek to ensure compliance and consistency.
No major control weaknesses were identified during 2016/17.

M & G

As commenced in AIR14 CPMR M&G has been used to report M & G investment directly from the system in a similar way to the Capital Works Programme. A single report provides all the information from the CPMR system.

Operating capital

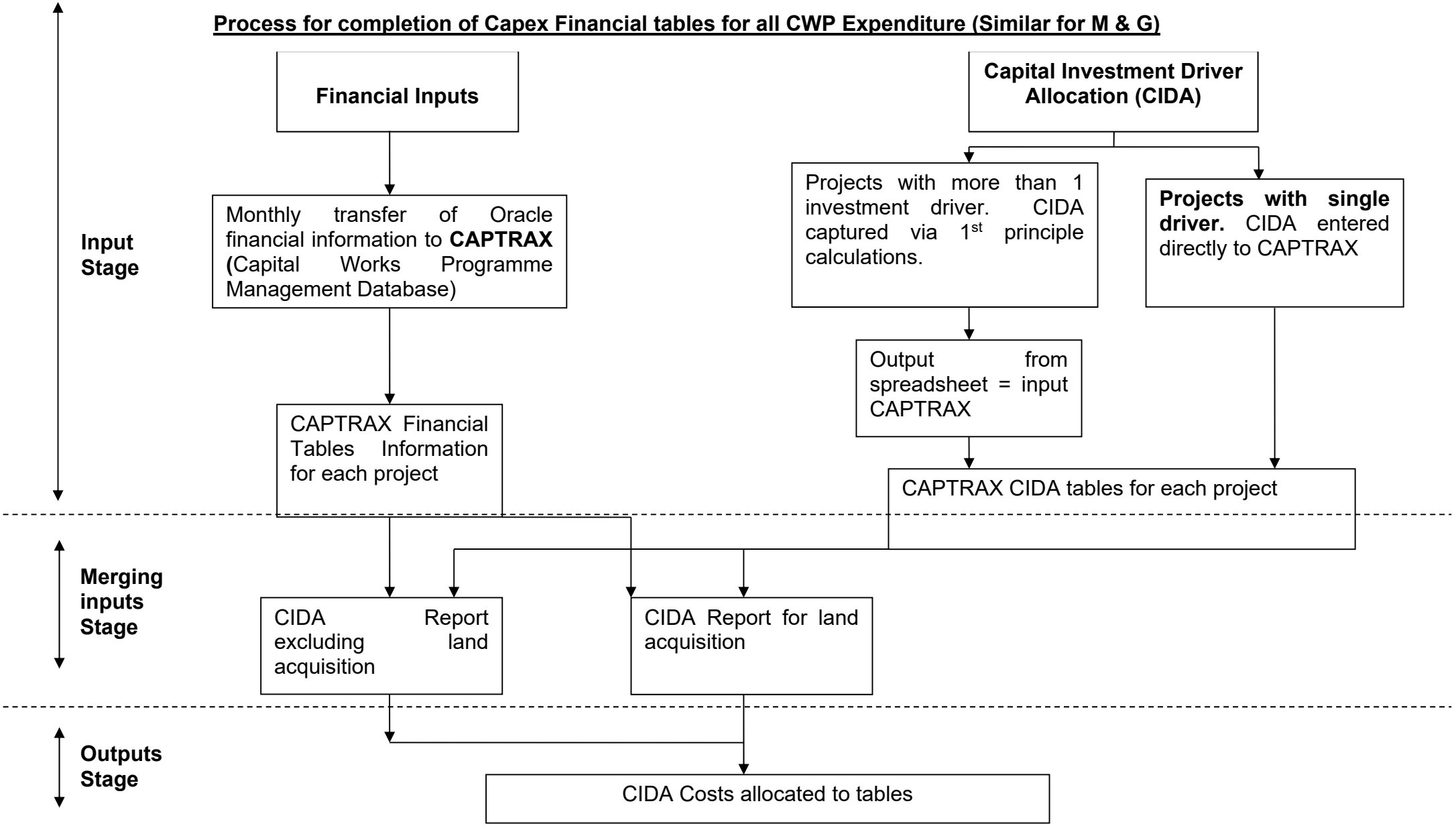
This area captures all Capital expenditure that is not managed via the CWP or included within M & G. For all Capital projects not on the CWP (herein referred to Operating Capital expenditure), the CIDA information has been captured at project level within CPMR Coptrax. This has been used in AIR17 for completion of Table 40. Unfortunately, the system needs further refinement to enable reporting information for Tables 32, 34, 36 and 36a accurately as there are a significant number of contracts within each project with combinations of a number of service areas, asset types and financial categories. For reporting in AIR17, each of the contacts was verified manually in order to ensure that accurate information was used for the population of the AIR tables in a similar manner to recent years. This approach uses the Asset In Course of Construction (AICC) database and ORACLE as data sources.

Table population

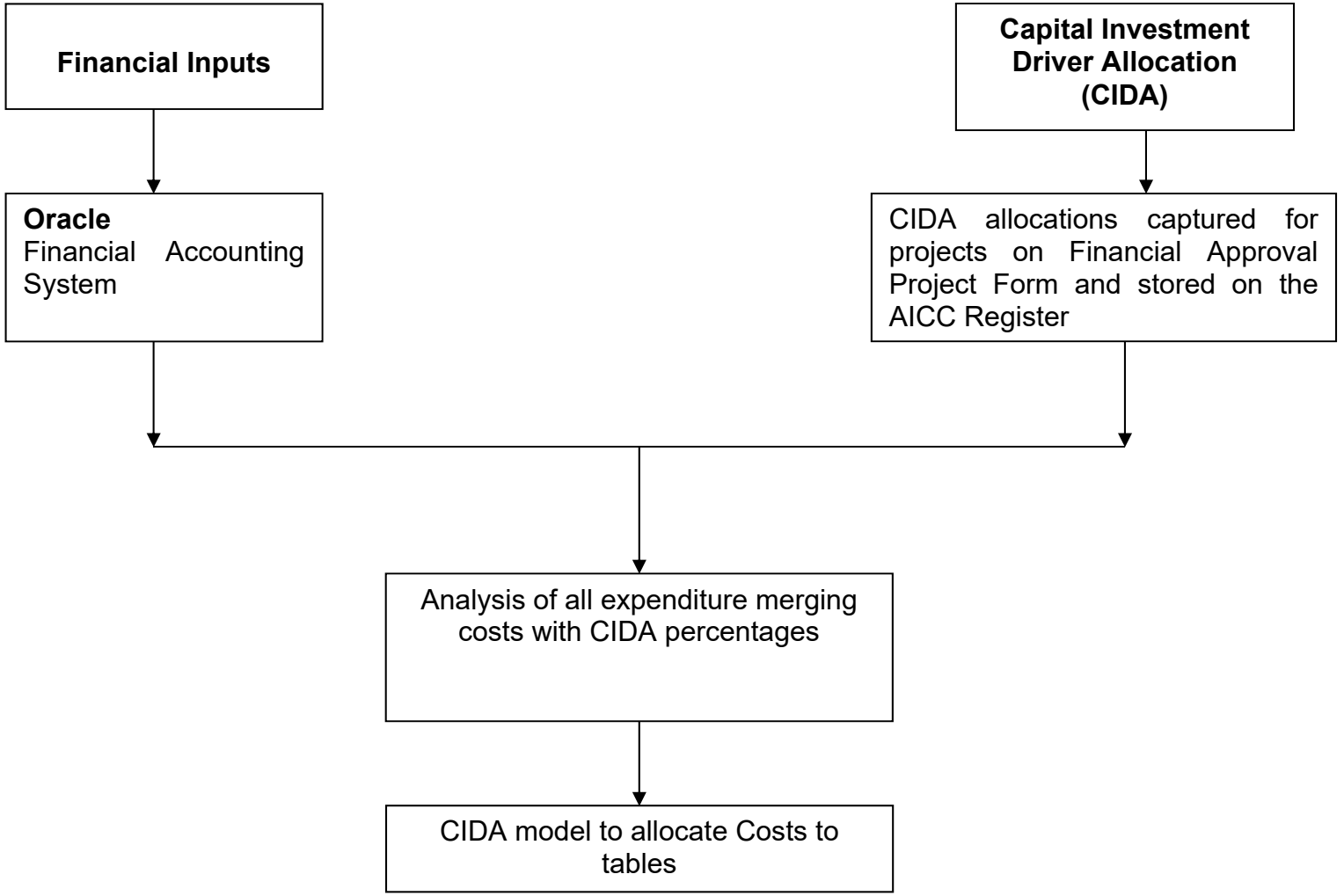
Data used in the population of the table is based on data extracted from the company's core systems and no assumptions are made in the allocation of project expenditure to the lines in the tables for all the expenditure with CIDA directly attributed. The small rounding figure of £3k of CWP expenditure (due to CATPRAX rounding finance to the nearest £k), is apportioned in each table in equal portions to the allocated expenditure.

Process diagrams below show the process for completing the tables.

Process for completion of Capex Financial tables for all CWP Expenditure (Similar for M & G)



Process for Completion of Capex financial tables for Operating Capital



Asset lives

The last comprehensive review of asset lives was completed as part of NIAMP2 in 2001. An interim review was completed in 2011/12 following the reporter recommendations in AIR11 and 8 new financial categories have been added to list used in NI Water. Any further changes will be processed as they occur. Asset lives on historic projects have not been amended to reflect new asset life categories. The new financial categories added and in use from April 2012 are as follows:

Table 1: New financial categories

Financial Category	Definition	Life in years
Fences	All fences around sites	40
Meters	Domestic Water Meters	17
Batteries	Batteries for loggers, toughbooks etc.	4
Filter Media	Media in Biological filters, Sand filters etc.	20
MBR Membranes	MBR membranes	5
Rotating Biological Filters	RBC package plants	20
Kiosks	All kiosk type structures including small control kiosks and prefabricated control buildings	20
Steel Tanks	All Steel tanks for storage and processes	40

Following reporter review of the PC15 plan a change initiated for AIR16 has been continued in AIR17. This change applies to the life for Meters, which have been changed to 17 years to align with PC15 Business plan assumptions. Expenditure for meters has been moved from Short life to Medium life for AIR 16 report. No changes have been made to previous years' data in respect of Meter expenditure reporting.

The above categories have been added to CPMR/Captrax for CIDA allocation. The availability of the financial category is dependent on the asset type selected so for example MBR membranes are only available for selection within WwTW. The definitions have also been uploaded within the selection process, as a reminder to the project manager when selections are being made.

Individual judgements on asset lives are not made during this annual process of AIR collation.

Methodology PPP table

Figures for PPP Alpha Capital maintenance have been taken directly from the PPP Model and apportioned between Fixed Plant and Civils as per the PPP Model. This is the same process as adopted since AIR09.

PPP - Omega

No PPP OMEGA capital has been reported in the AIR17 financial tables for the following reasons:

- The Capital Cost split between Civils and M & E has been extracted from the PPP Model. This does not distinguish between infra and non infra elements and unlike ALPHA no valid assumptions can be made to define individual projects as some of the projects contain both infra and non infra elements.
- QBEG information has been captured on each project within OMEGA in a similar basis as was captured for the SBP submission, which includes backlog base. In order to maintain consistency within all the tables we have not populated any of the OMEGA capital expenditure within the tables.

PPP - Kinnegar

No PPP Kinnegar residual interest finance has been populated, as NIW have no information on either the QBEG or the Asset Life categories for this project.

NIW Table

The asset lives adopted for Regulatory reporting are consistent with those in the Fixed Asset Register (FAR). The links for reporting purposes are outlined in the Capital investment Driver allocation manual.

The last comprehensive review of asset lives was completed as part of NIAMP2 in 2001. An interim review was completed in 2011/12 and new financial categories have been added to NI Water systems for application from April 2012.

Expenditure is charged to individual projects and these are assigned individual asset lives for regulatory reporting.

This table is consistent with the analysis in Table 32. All expenditure reported in Table 34 is in outturn prices, gross of grants and contributions.

PPP Table

The expenditure of [redacted] on this table relates to the Capital Maintenance element of PPP Alpha expenditure for 2016/17. The [redacted] is reported in Section B of the table and is split using the Asset lives split assumed in the PPP Model. There is no PPP Capital on Sewerage.

Land Disposal

NI Water has updated the figures in the former years for this line. The reason for the correction was due to incorrect understanding of the definition. In prior years, the figures reported were the actual disposal receipts rather than the HCA book value. The HCA book value is determined from the Fixed Asset Register based upon the Asset Mgt plan completed in 2001. The figures stated are the HCA book values for all disposals in the stated year.

Assets fully depreciated but still in use at year-end

The total current cost Gross Book Value (GBV) of assets on the fixed asset register at 31st March 17 with zero Net Book Value (NBV) is £231,758,785.10.

Confidence Grades

Confidence grades have been assigned to the elements of Table 34 based on guidance received from the Reporter in AIR11:

> "the Company should apply a confidence grade of B2 for most lines, with B3 for the smaller numbers (where a single misallocation could be more significant)."

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 35 FINANCIAL MEASURES
CAPITAL INVESTMENT - PUBLIC EXPENDITURE RECONCILIATION

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
A	**Available PE capital budget in nominal prices**											
1	Public Expenditure capital budget available	£m	3	0.000	165.800	155.629	140.731	147.110				
B	**Capital budget statement in nominal prices**											
2	Public Expenditure capital budget used	£m	3	0.000	165.540	154.946	140.291	147.099				
3	Alpha PPP maintenance	£m	3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				
4	Residual interest in off-balance sheet PPP	£m	3									
5	IFRS infrastructure renewal charge adjustment	£m	3	0.000	0.988	1.154	1.194	1.117				
6	*Further adjustments.....*	£m	3	0.000	0 000	0.000	0.000	0.000				
6a	Unwinding of capital provision	£m	3	0.000	0.000	0.000	0.000	0.000				
6b	Rounding	£m	3	0.000	0.013	-0.006	-0.001	0.000				
6c	Decapitalised assets	£m	3	0.000	0.000	0.238	0.005	0.000				
7	Capital grants and contributions	£m	3	0.000	6.586	7.331	7.985	11.550				
8	Capital grants and contributions transferred to deferred credits	£m	3	0.000	-0 693	-1.025	-0.999	-1.284				
9	NI Water gross capital budget	£m	3	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]				

Table 35 – Financial Measures – Capital Investment – Public Expenditure Reconciliation

Introduction

This table provides a statement of the capital budget available and capital budget utilised in Public Expenditure terms and the gross capital expenditure by NI Water, all expressed in nominal terms. The table follows the content and structure of Table 3.2 of the PC15 information requirements to facilitate comparison between the Business Plan submission and actual expenditure.

Block A reports the available Public Expenditure capital budget agreed with the Department for infrastructure, DfI, for the relevant financial year. Block B provides a reconciliation between the Public Expenditure capital budget used and NI Water's gross capital expenditure, identifying differences arising from changes due to the treatment of PPP unitary charge, different accounting treatments and the impact of income from capital grants and contributions.

Line 1 – Available PE capital budget in nominal prices

Entries to line 1 represent the total budget 'Capital DEL Acquisitions' agreed with the DfI for each financial year and includes movements to funding resulting from budget transfers within monitoring rounds. This is all expenditure which DfI classifies as 'capital DEL' and includes normal capital expenditure (both base & enhancement), PPP capital maintenance on on-balance sheet PPP contracts and residual interest on off-balance sheet PPP contracts.

As DfI have adopted IFRS as an accounting framework, the available PE will also be stated on an IFRS basis.

In 2016/17, the PE capital DEL budget available at the start of the financial year was £11.3m short of that assumed within the PC15 Final Determination (PC15 FD). This is set out in the table below and shows that the £11.3m capital DEL is equivalent to a £11.0m drop in gross capital expenditure, once other capital allocations are taken into account.

	Final Determination	Budget	Variance
	2016-17	2016-17	2016-17
	£M	£M	£M
PE Capital DEL Acquisitions	158.0	146.7	(11.3)
Alpha PPP maintenance	[redacted]	[redacted]	[redacted]
Residual interest in off balance sheet PPP	-3.6	-3.6	-
IFRS infrastructure renewal charge adjustment	1.1	1.1	-
Capital grants and contributions	6.5	7.0	+0.5
Capital grants and contributions transferred to deferred credits	-0.8	-1.0	(0.2)
NI Water gross capital budget	[redacted]	[redacted]	[redacted]

In terms of movements in funding within the current year, 'Capital DEL Acquisitions' was increased by £0.250m for Carnbane TNI depot refurbishment and increased by a further £0.160m to cover additional TNI Article 17 developments as a result of a budget transfer.

The PE capital DEL funding at the end of the 2016/17 year is therefore as follows:

	2016/17
	£m
PE Capital DEL budget at start of year	146.700
TNI – Carnbane Depot	0.250
TNI – Article 17 Developments	0.160
PE Capital DEL budget at end of year	**147.110**

Other changes during the year

DfI confirmed the final 2016-17 budget position for NI Water of £146.7m DEL Capital. Given this resulted in a significant shortfall of £11.3m from the PC15 FD, NI Water worked with the Utility Regulator to assess changes to the outputs required of NI Water in 2016/17.

NI Water presented a proposed capital programme for 2016-17 to the Utility Regulator on 15th March 2016. After a series of meetings with stakeholders and a discussion at the 13th May Output Review Group (ORG), the Utility Regulator wrote to NI Water on 1 June advising us of their acceptance of our proposal.

Although overall changes to the PE capital budget within the reporting year were minimal, adjusting outputs on a year by year basis does not facilitate efficient capital planning and the momentum required to deliver a six year capital programme. This has been especially true in 2015/16 and 2016/17 given the delay in agreeing outputs for the year.

Line 2 – PE capital budget used

Represents total 'Capital DEL Acquisitions' calculated as line 9 minus the sum of lines 3 – 8 inclusive.

The overspend from the original capital budget available is calculated as £0.399m (£147.099m less £146.700m). Taking into account the additional budget transfers received (£0.250m & £0.160m), there was an underspend on available 'Capital DEL Acquisitions' of £0.011m (circa 0.3%).

Note the PE capital used has been agreed to our 2016/17 'provisional outturn' return submitted to DfI on the 28th April 2017. The 2016/17 'final outturn' will be provided to DfI mid-July. At this time, we are not aware of any potential change to the provisional figure we have used but will update the Utility Regulator of any change post submission.

Line 3 – Alpha PPP maintenance

This represents the capital maintenance carried out at Alpha sites during the year by Dalriada water [redacted]

Following an accounting treatment change implemented in 2013/14, the capital maintenance element of the unitary charge is now allocated straight line across the life of the contract. This correctly reflects that the unitary charge does not fluctuate with changes in the capital maintenance spend in any year. This change now means that AIR17 Table 42 line 14 now represents an accrued amount of capital maintenance and no longer represents actual capital maintenance. The difference between the two figures is held in NL account 1521 – PPP deferred capital maintenance.

Line 4 – Residual interest in off-balance sheet PPP

This represents the element of the Omega and Kinnegar PPP unitary payments that is allocated against residual interest in the relevant year.

For Regulatory accounting purposes, Omega & Kinnegar assets are held off-balance sheet. Each year a portion of the unitary charge is debited against a 'residual interest asset' on the balance sheet with the aim of building up an asset that can be transferred to NI Water at end of the PPP contract term. The value of this asset would equal the forecast residual value of the relevant assets at the time of transfer.

Values for residual interest are sourced directly from the original contractors' financial models. The breakdown between Omega & Kinnegar is shown below.

	2015/16
Kinnegar Residual Interest	[redacted]
Omega Residual Interest	[redacted]
Total	[redacted]

Entries to this line reconcile directly to AIR17 Table 42 line 15.

Line 5 – IFRS infrastructure renewals charge adjustment

This line represents a transfer of expenditure, which is treated differently under IFRS and our current Regulatory Accounting Guidelines, RAG's.

DfI have adopted IFRS and require certain types of repair, which we currently classify as capital expenditure under the RAG's, to be reported as operational expenditure under IFRS and therefore under PE reporting.

The table summarises expenditure currently decapitalised under IFRS.

	Actual Total 16-17
IFRS Adjustment on De-capitalised Repairs	
LN098101 - Leakage Detection SE	171,989
LN099101 - Leakage Detection NW	114,660
LN101101 - Repair of Defects identified as a result of leakage detection activities	369,060
LN110105 - High Volume DMA's SE (Consultants' fees)	95,887
LN110106 - High Volume DMA's NW (Consultants' fees)	114,260
LN136101 - Active Leakage Control SE	150,491
LN137101 - Active Leakage Control NW	100,327
TOTAL	**1,116,675**

Line 6 – Further adjustments – not required

Line 7 – Capital grants and contributions

This represents the total of capital grants and contributions received in nominal prices.

Entries to this line are consistent with AIR17 Table 37 line 17.

Line 8 – Capital grants and contributions transferred to deferred credits

An element of the capital grants and contributions received is assumed to relate to non-infrastructure assets with an associated useful life. Adoption of the financial 'matching' principle, i.e. the process of linking revenue to associated costs means that we must match the amortisation of the contribution against the depreciation charge on the assets over their useful economic life.

We currently assume 30% of infrastructure charges relate to non-infrastructure and is transferred to a deferred capital contribution account and released to the P&L over a 20 year period.

We have also received and deferred a number of capital grants in 2015/16. These are being released over a period of 60 years. As noted above, a different approach has been adopted in PE for these grants.

Entries to this line are consistent with AIR17 Table 37 line 18.

Line 9 – NI Water gross capital expenditure

Represents gross capital expenditure as per AIR17 Table 36.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 36 FINANCIAL MEASURES
CAPITAL INVESTMENT - GROSS CAPITAL INVESTMENT SUMMARY

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**Water service**																			
1	Non-infrastructure maintenance (gross of grants and contributions)	£m	3	15.909	16.825	B3	17.891	B3	23.235	B2	23.543	B3								
2	Infrastructure renewals expenditure (gross)	£m	3	22.593	22.391	B3	23.055	B3	11.133	B2	19.497	B3								
3	Capital expenditure - quality enhancement programme	£m	3	9.972	14.396	B3	21.913	B3	14.646	B2	14.177	B3								
4	Capital expenditure - customer service	£m	3	3.126	3.262	B3	2.616	B3	1.194	B2	3.175	B3								
5	Capital expenditure - supply demand balance	£m	3	17.782	15.049	B3	21.478	B3	13.791	B2	7.393	B3								
5a	Capex - new development	£m	3	8.323	4.777	B3	4.628	B3	5.258	B2	4.721	B3								
5b	Capex - growth	£m	3	0.244	0.309	B3	0.634	B3	0.051	B3	0.016	B3								
5c	Capex - security of supply	£m	3	9.214	9.842	B3	16.099	B3	8.436	B2	2.625	B3								
5d	Capex - free meters	£m	3	0.000	0.121	B3	0.117	B3	0.046	B3	0.031	B3								
6	Gross capital expenditure - water service	£m	3	69.382	71.923	B3	86.953	B3	63.999	B2	67.786	B3								
B	**Sewerage Service**																			
7	Non-infrastructure maintenance (gross of grants and contributions)	£m	3	41.258	50.986	B3	30.084	B3	42.799	B2	46.247	B3								
8	Infrastructure renewals expenditure (gross)	£m	3	8.775	7.727	B3	8.502	B3	9.010	B2	10.434	B3								
9	Capital expenditure - quality enhancement programme	£m	3	21.626	21.238	B3	15.179	B3	13.851	B2	13.559	B3								
10	Capital expenditure - customer service	£m	3	2.899	3.955	B3	4.137	B3	4.406	B2	5.359	B3								
11	Capital expenditure - supply demand balance	£m	3	18.318	11.736	B3	14.043	B3	9.626	B2	10.951	B3								
11a	Capex - new development	£m	3	17.871	11.579	B3	14.013	B3	9.626	B2	10.951	B3								
11b	Capex - sewage treatment	£m	3	0.447	0.158	B3	0.030	B3	0.000	B3	0.000	B3								
12	Gross capital expenditure - sewerage service	£m	3	92.876	95.643	B3	71.945	B3	79.692	B2	86.551	B3								
C	**Gross capital expenditure total**																			
13	Gross capital expenditure total	£m	3	162.258	167.566	B3	158.898	B3	143.691	B2	154.337	B3								
D	**Adopted assets, nil cost assets**	£m	3																	
14	Water service assets adopted at nil cost	£m	3	0 000	0.000	B3	0.000	B3	0.000	B3	0.000	B3								
15	Water service assets adopted in return for an payment	£m	3	0.000	0.000	B3	0.000	B3	0.000	B3	0.000	B3								
16	Sewerage service asset adopted at nil cost	£m	3	48.233	59.566	B3	48.406	B3	32.724	B2	32.071	B3								
17	Sewerage service assets adopted in return for a payment.	£m	3	0.000	0.000	B3	0.000	B3	0.000	B3	0.000	B3								
18	Total adopted assets and nil cost assets	£m	3	48.233	59.566	B3	48.406	B3	32.724	B3	32.071	B3								
E	**Infrastructure renewals expenditure (net)**																			
19	Water service infrastructure renewals expenditure (net) (NIW only)	£m	3	22.514	22.277	B3	23.022	A2	10.930	B2	19.430	A2								
20	Sewerage service infrastructure renewals expenditure (net) (NIW only)	£m	3	8 609	7.632	B3	8.438	A2	9.010	B2	10.434	A2								
21	Total infrastructure renewals expenditure (net) (NIW only)	£m	3	31.123	29.909	B3	31.460	A2	19.941	B2	29.864	A2								
F	**Total asset additions**																			
22	Water service total asset additions	£m	3	46.788	49.532	B3	63.898	B3	52.866	B2	48.289	B3								
23	Sewerage service total asset additions	£m	3	132.334	147.482	B3	111.849	B3	103.406	B2	108.188	B3								
24	Total asset additions	£m	3	179.122	197.014	B3	175.747	B3	156.272	B2	156.477	B3								

Table 36 - Capital Investment - Gross Capital Investment Summary

Refer to Chapter 30 for detailed commentary on this table. There are no reconciling items to report.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 36A FINANCIAL MEASURES
CAPITAL INVESTMENT - GROSS CAPITAL INVESTMENT VARIANCE

	DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11	12	13	14
				PC15 OUTTURN (£M)							PC15 FINAL DETERMINATION (£M)						
				REPORTING YEAR 2015-16	REPORTING YEAR 2016-17	REPORTING YEAR 2017-18	REPORTING YEAR 2018-19	REPORTING YEAR 2019-20	REPORTING YEAR 2020-21	TOTAL TO DATE PC15	REPORTING YEAR 2015-16	REPORTING YEAR 2016-17	REPORTING YEAR 2017-18	REPORTING YEAR 2018-19	REPORTING YEAR 2019-20	REPORTING YEAR 2020-21	TOTAL TO DATE PC15
A	**Water service**																
1	Non-infrastructure maintenance (gross of grants and contributions)	£m	3	23.235	23.543					46.778	22.576	23.060					45.637
2	Infrastructure renewals expenditure (gross)	£m	3	11.133	19.497					30.630	14.012	14.313					28.325
3	Capital expenditure - quality enhancement programme	£m	3	14.646	14.177					28.823	13.810	14.106					27.917
4	Capital expenditure - customer service	£m	3	1.194	3.175					4.369	4.036	4.123					8.159
5	Capital expenditure - supply demand balance	£m	3	13.791	7.393					21.184	14.109	14.411					28.520
6	Gross capital expenditure - water service	£m	3	63.999	67.786					131.785	68.544	70.013					138.557
B	**Sewerage Service**																
7	Non-infrastructure maintenance (gross of grants and contributions)	£m	3	42.799	46.247					89.046	36.143	36.918					73.061
8	Infrastructure renewals expenditure (gross)	£m	3	9.010	10.434					19.444	10.575	10.802					21.377
9	Capital expenditure - quality enhancement programme	£m	3	13.851	13.559					27.410	20.380	20.817					41.197
10	Capital expenditure - customer service	£m	3	4.406	5.359					9.765	8.802	8.991					17.794
11	Capital expenditure - supply demand balance	£m	3	9.626	10.951					20.577	8.016	8.188					16.204
12	Gross capital expenditure - sewerage service	£m	3	79.692	86.551					166.243	83.917	85.715					169.632
C	**Gross capital expenditure total**																
13	Gross capital expenditure total	£m	3	143.691	154.337					298.028	152.461	155.728					308.189
D	**CAPITAL CONTRIBUTIONS NET OF DEFERRED CREDITS**																
14	Capital contributions for new connections	£m	3	7.782	11.483					19.265	4.174	4.263					8.437
15	Other capital contributions	£m	3	0.203	0.067					0.270	1.226	1.253					2.479
16	Total capital contributions net of deferred credits	£m	3	7.985	11.550					19.535	5.400	5.516					10.916
E	**TOTAL CAPITAL EXPENDITURE (NET)**																
17	Total capital expenditure (net)	£m	3	135.706	142.787					278.493	147.061	150.212					297.273

	DESCRIPTION	15	16	17	18	19	20	21	22	23	24	25	26	27	28
		PC15 VARIANCE FROM FD (£M)							PC15 VARIANCE FROM FD (%)						
		REPORTING YEAR 2015-16	REPORTING YEAR 2016-17	REPORTING YEAR 2017-18	REPORTING YEAR 2018-19	REPORTING YEAR 2019-20	REPORTING YEAR 2020-21	TOTAL TO DATE PC15	REPORTING YEAR 2015-16	REPORTING YEAR 2016-17	REPORTING YEAR 2017-18	REPORTING YEAR 2018-19	REPORTING YEAR 2019-20	REPORTING YEAR 2020-21	TOTAL TO DATE PC15
A	**Water service**														
1	Non-infrastructure maintenance (gross of grants and contributions)	-0.659	-0.483					-1.142	-0.029	-0.021					-0.025
2	Infrastructure renewals expenditure (gross)	2.879	-5.184					-2.305	0.205	-0.362					-0.081
3	Capital expenditure - quality enhancement programme	-0.835	-0.071					-0.906	-0.060	-0.005					-0.032
4	Capital expenditure - customer service	2.842	0.947					3.789	0.704	0.230					0.464
5	Capital expenditure - supply demand balance	0.318	7.018					7.336	0.023	0.487					0.257
6	Gross capital expenditure - water service	4.545	2.227					6.772	0.066	0.032					0.049
B	**Sewerage Service**														
7	Non-infrastructure maintenance (gross of grants and contributions)	-6.656	-9.329					-15.985	-0.184	-0.253					-0.219
8	Infrastructure renewals expenditure (gross)	1.565	0.368					1.933	0.148	0.034					0.090
9	Capital expenditure - quality enhancement programme	6.529	7.258					13.787	0.320	0.349					0.335
10	Capital expenditure - customer service	4.396	3.632					8.028	0.499	0.404					0.451
11	Capital expenditure - supply demand balance	-1.610	-2.764					-4.373	-0.201	-0.338					-0.270
12	Gross capital expenditure - sewerage service	4.225	-0.836					3.389	0.050	-0.010					0.020
C	**Gross capital expenditure total**														
13	Gross capital expenditure total	8.770	1.391					10.161	0.058	0.009					0.033
D	**CAPITAL CONTRIBUTIONS NET OF DEFERRED CREDITS**														
14	Capital contributions for new connections	-3.608	-7.220					-10.828	-0.864	-1.693					-1.283
15	Other capital contributions	1.023	1.186					2.209	0.834	0.947					0.891
16	Total capital contributions net of deferred credits	-2.585	-6.034					-8.619	-0.479	-1.094					-0.790
E	**TOTAL CAPITAL EXPENDITURE (NET)**														
17	Total capital expenditure (net)	11.355	7.425					18.780	0.077	0.049					0.063

Table 36a – Capital Investment – Expenditure comparison by service and purpose

Refer to Chapter 30 for detailed commentary on this table. There are no reconciling items to report.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 37 FINANCIAL MEASURES
CAPITAL INVESTMENT - CAPITAL GRANTS AND CONTRIBUTIONS

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
A	**Water Service - Maintenance grants and contributions**											
1	MNI - grants and contributions.	£m	3	0 000	0.000	0 000	0 000	0.000				
2	Infrastructure renewals grants and contributions.	£m	3	0.079	0.114	0 033	0.203	0.067				
3	Total maintenance grants and contributions	£m	3	0.079	0.114	0 033	0 203	0.067				
B	**Water Service - Enhancement grants and contributions**											
4	Infrastructure charge receipts - new connections	£m	3	1.127	1.272	1.426	1 800	2.284				
5	Enhancement requisitions, grants and contributions	£m	3	2.031	2.054	2 387	2 553	4.038				
6	*Other categories of capital grants and contributions to be added by NI Water*	£m	3	0 000	0.000	0.000	0.000	0.000				
7	Total enhancement capital grants and contributions	£m	3	3.158	3.326	3 813	4 353	6.322				
C	**Water Service - Deferred credits**											
8	Capital grants and contributions transferred to deferred credits	£m	3	0 500	0.382	0 666	0 545	0.685				
D	**Sewerage Service - Maintenance grants and contributions**											
9	MNI - grants and contributions.	£m	3	0 000	0.000	0 000	0 000	0.000				
10	Infrastructure renewals grants and contributions.	£m	3	0.166	0.095	0 064	0.000	0.000				
11	Total maintenance grants and contributions	£m	3	0.166	0.095	0 064	0.000	0.000				
E	**Sewerage Service - Enhancement grants and contributions**											
12	Infrastructure charge receipts - new connections	£m	3	0.911	1.036	1.195	1.515	1.997				
13	Enhancement requisitions, grants and contributions	£m	3	1.443	2.015	2 226	1.914	3.164				
14	*Other categories of capital grants and contributions to be added by NI Water*	£m	3	0 000	0.000	0.000	0.000	0.000				
15	Total enhancement capital grants and contributions	£m	3	2.354	3.051	3.421	3.429	5.161				
F	**Sewerage Service - Deferred credits**											
16	Capital grants and contributions transferred to deferred credits	£m	3	0.404	0.311	0 359	0.454	0.599				
G	**Totals for the Water and Sewerage Services**											
17	Total enhancement capital grants and contributions	£m	3	5.757	6.586	7 331	7 985	11.550				
18	Total capital grants and contributions transferred to deferred credits	£m	3	0 904	0.693	1 025	0.999	1.284				

Table 37 – Capital Investment - Capital Grants and Contributions

Line 1 – Water service MNI – grants and contributions

Nil for 2016-17.

Line 2 – Water service maintenance grants and contributions

This line shows £0.067m and represents contributions from developers towards the cost of watermains diversions.

Line 4 – Water service infrastructure charge receipts - new connections

This line shows £2.284m and represents the receipts from developers for water infrastructure charges. This is stated gross prior to accounting for the element that is deemed to contribute to non-infrastructure expenditure.

Line 5 – Water service enhancement requisitions, grants and contributions

This line can be summarised as follows:

New water connections	£ 2.945m
Water requisitions	£ 1.093m
Grants	£ nil
Total Line 5	**£ 4.038m**

The grants can be summarised as follows:

N/A

Line 6 – Water service other categories of capital grants and contributions

Nil for 2016-17.

Line 8 – Water service deferred credits

This line shows £0.685m and represents:

(i) the element of the receipts from developers for water infrastructure charges that are deemed to contribute to non-infrastructure expenditure.

This is calculated as follows:
Line 4 £2.284m x 30% = £0.685m

The 30% used in this calculation is based on an estimate of the future capital expenditure that relates to non-infrastructure growth.

Line 9 – Sewerage service MNI – grants and contributions

Nil for 2016-17.

Line 10 – Sewerage service - maintenance grants and contributions

Nil for 2016-17.

Line 12 – Sewerage service - Infrastructure charge receipts - new connections

This line shows £1.997m and represents the receipts from developers for sewerage infrastructure charges. This is stated gross prior to accounting for the element that is deemed to contribute to non-infrastructure expenditure.

Line 13 – Sewerage service - enhancement requisitions, grants and contributions

This can be summarised as follows:

New sewerage connections	£1.049m
Sewerage requisitions	£1.189m
Sewers for adoption –application fees	£0.926m
Total Line 13	**£3.164m**

Line 14 – Sewerage service - other categories of capital grants and contributions

Nil for 2016-17.

Line 16 – Sewerage service deferred credits

This line shows £0.599m and represents the element of the receipts from developers for sewerage infrastructure charges that are deemed to contribute to non-infrastructure expenditure.

This is calculated as follows:
Line 12 £1.997m x 30% = £0.599m

The 30% used in this calculation is based on an estimate of the future capital expenditure that relates to non-infrastructure growth.

Comparison of 2016-17 to PC15*

The following table shows a comparison of the actual contributions for 2016-17 compared to PC15.

	2016-17	**2016-17**	**2016-17**	**2016-17**
	Actual	**PC15**	**Variance**	**Variance**
	£m	**£m**	**£m**	**%**
Water				
Infrastructure – base	0.1	0.0	0.1	100.0%
Infrastructure charges - gross	2.3	1.5	0.8	53.3%
Connections	2.9	2.1	0.8	38.1%
Requisitions	1.1	0.1	1.0	1000.0%
Grants	0.0	0.0	0.0	N/A
Total	**6.4**	**3.7**	**2.7**	**72.97%**
Included in the gross Infrastructure charges above the non-infrastructure element - 30%	0.7	0.5	0.3	75.0%
Sewerage				
Infrastructure – base	0.0	0.0	0.0	N/A
Infrastructure charges – gross	2.0	1.1	0.9	81.8%
Connections	1.0	1.0	0.0	N/A
Requisitions	1.2	0.1	1.1	11000.0 %
Sewers for adoption	0.9	0.6	0.3	50.0%
Total	**5.1**	**2.8**	**2.3**	**82.1%**
Included in the gross Infrastructure charges above the non infrastructure element - 30%	0.6	0.3	0.3	100.0%

Total contributions	**11.5**	**6.3**	**5.0**	**79.4%**
Which includes: *non-infrastructure contributions*	**1.3**	**0.8**	**0.6**	**75.0%**

**This table is rounded to one decimal place to reflect the presentation of these figures in the PC15 submission.*

Note: no base infrastructure contributions or new grants were assumed in PC15.

The level of activity around developer contributions is very difficult to project.

The Developers Services Team has made the following observations in regards to the status of the new development market.

The development market has been relatively depressed over the past eight years with few developments brought to completion since 2009. However, the development sector is now showing signs of strengthening with NIW noting an increase of approximately 30% in the activity in the sector over the last two years, which is consistent with a recent NHBC UK Report. However, the trend shows a smaller average number of units being constructed per development, which will impact on all the associated developer contributions.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 38 FINANCIAL MEASURES

CAPITAL INVESTMENT - ADDITIONAL OPEX FROM CAPEX

	DESCRIPTION	UNITS	DP	1 2012-13	2 2013-14	3 2014-15	4 2015-16	5 2016-17	6 2017-18	7 2018-19	8 2019-20	9 2020-21
A	**OPEX from CAPEX**											
1	Additional OPEX arising from Water Service projects	£m	3		0 215	0.004	0.027	0.026				
2	Additional OPEX arising from Sewerage Service projects	£m	3		1.483	0.403	0.003	-0.021				
3	Total additional OPEX	£m	3		1 698	0.407	0.030	0.005				

Table 38 - Capital Investment - Additional Opex from Capex

A list of sites with CAR ID's is obtained and the Opex costs for 2016/17 are calculated for these sites through various reports.

The Opex from Capex costs have been calculated by taking the difference between the total 2015/16 costs and the 2016/17 costs.

Line 1 Additional OPEX arising from water service projects

The total of water pumping stations and water treatment plants has been used to populate Line 1 in Table 38, which is £0.026M.

Line 2 - Additional OPEX arising from sewerage service projects

The total of the sewage pumping stations and the wastewater treatment works have been used to populate Line 2 in Table 38, which is a reduction of £0.021M.

Line 3 - Total additional OPEX

The total figure is £0.005M.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 40 CAPITAL INVESTMENT
CAPITAL INVESTMENT MONITORING - CIM
ANNUAL INFORMATION RETURN 2016-17

Project Identification

Sort Ref	CIM Submission Reference	Project ID Reference	Project Name	PC Project Period	Parent Project ID	Substitute Project ID	Primary Asset Category	PC10 Programme	Regulatory Sign-Off Required
1	2	3	4	5	6	7	8	9	10
1	2016_17 Q4	KS927	Whitechurch Road Ballywalter Sewage Scheme	00	KS113		07	24	
2	2016_17 Q4	KS939	Central Promenade, Newcastle CSO Upgrade (Pattons Bridge)	03	KS848		07	12	
3	2016_17 Q4	JA264	Crosskennan SR, Antrim, Water Pumping Station.	00			05	06	
4	2016_17 Q4	JA271	Killylane WTW	02			06	01	
5	2016_17 Q4	JA289	Lylehill WPS Templepatrick Site Security Improvements	00			05	01	
6	2016_17 Q4	JA290	Killylane Dunore East Phase 1	00			03	08	
7	2016_17 Q4	JA300	A31 Magherafelt By-Pass, Watermain Diversions	00			03	23	
8	2016_17 Q4	JA306	Carrickfergus Road, Larne, Water Quality Schemes.	00			03	08	
9	2016_17 Q4	JA308	A6 Castledawson to Randalstown	00			03	23	
10	2016_17 Q4	JA310	WIIM Phase 2 Dunore East WP	06			03	08	
11	2016_17 Q4	JA311	WIIM Phase 2 Dunore Point WP	06			03	08	
12	2016_17 Q4	JA312	Dunore Point WTW Renewable Energy	06			06	20	
13	2016_17 Q4	JA313	Antrim North WIIM 2.1 Work Package	06			03	08	
14	2016_17 Q4	JA314	Antrim South WIIM 2.1 Work Package	06			03	08	
15	2016_17 Q4	JB671	Glenlough Pumping Station & Pumping Main	01			03	01	
16	2016_17 Q4	JB692	Rathlin Island SR rationalisation	00			03	06	
17	2016_17 Q4	JB693	Carland to Cookstown Strategic Trunk Main	04			03	05	
18	2016_17 Q4	JB694	Tully Rehab Work Packages.	03			03	08	
19	2016_17 Q4	JB695	Buckna WPS Upgrade - Ballymena Flow Optimisation	03			05	01	
20	2016_17 Q4	JB704	Desertcreat Road/ Lindsayville Road, Cookstown, Replacement	00			03	08	
21	2016_17 Q4	JB706	A26 Dualling: Glarryford to A44 (Drones Road) Junction - Water	00			03	23	
22	2016_17 Q4	JB709	Lough Fea CWB Capacity Increase	06			04	06	
23	2016_17 Q4	JB713	Replacement Watermains 2014/15 - Reactive, Bundle 1	03			03	08	
24	2016_17 Q4	JB717	Craigyhill Bungalows, Larne, Lead Supply Pipe Replacement Pi	00			03	23	
25	2016_17 Q4	JB723	Moyola WTW to Mullaghaboy SR Trunk Main Replacement	06			03	23	
26	2016_17 Q4	JB724	Killylane WTW to Crosshill SR Trunk Main Replacement (part)	06			03	23	
27	2016_17 Q4	JB725	WIIM Phase 2 Lough Fea WP	06			03	08	
28	2016_17 Q4	JB726	WIIM Phase 2 Moyola Magherafelt WP	06			03	08	
29	2016_17 Q4	JB727	WIIM Phase 2 Altnahinch Bushmills WP	06			03	08	
30	2016_17 Q4	JB729	Bonneytober SR Rehabilitation	06			04	07	
31	2016_17 Q4	JC385	Monaclogh SR Capacity Extension	06			04	06	
32	2016_17 Q4	JC386	Craigpark SR Capacity Extension	06			04	06	
33	2016_17 Q4	JC387	Lagavara SR Capacity Extension	06			04	06	
34	2016_17 Q4	JC391	Marine Apartments, Ballycastle, W/main ext.	00			03	23	
35	2016_17 Q4	JC397	Kilraughts Road Ballymoney Water Main Replacement	03			03	23	
36	2016_17 Q4	JC399	WIIM Phase 2 Ballinrees Limavady WP	06			03	08	
37	2016_17 Q4	JC400	WIIM Phase 2 Altnahinch Bushmills 2 WP	06			03	08	
38	2016_17 Q4	JF007	Seagahan Zone Watermain Improvements	00			03	08	
39	2016_17 Q4	JF606	WIIM Phase 2 Clay Lake Keady WP	06			03	08	
40	2016_17 Q4	JF607	Dorisland Impounding Reservoir	06			02	03	
41	2016_17 Q4	JF608	Craigavon WIIM 2.1 Work Package	06			03	08	
42	2016_17 Q4	JG035	Ballydougan to Newry Main Link Reinforcement	02			03	05	
43	2016_17 Q4	JG036	Castor Bay to Dungannon Strategic Trunk Mains	01			03	05	
44	2016_17 Q4	JG079	Legahory Craigavon, Replacement Watermains	00			03	08	
45	2016_17 Q4	JG080	Cranny Lane, Portadown Watermain Ext	00			03	23	
46	2016_17 Q4	JG082	Derryola Bridge Road, Craigavon, Replacement Watermain	00			03	23	
47	2016_17 Q4	JG084	Seagoe Refurbishment	06			15	20	
48	2016_17 Q4	JG085	Millennium Way, Lurgan (New Road Construction)	00			03	23	
49	2016_17 Q4	JI003	Water Mains Rehabilitation, New and Replacement incl FTS	00			03	08	
50	2016_17 Q4	JF592	Granville Dungannon Invest NI Watermain Extension	00	JI003		03	23	
51	2016_17 Q4	JR444	Newtownabbey Zone Watermain Improvements Phase 3	00	JI003		03	08	
52	2016_17 Q4	JI005	Base Maintenance (Water)	00			02	01	
53	2016_17 Q4	JF581	Clay Lake - Remedial Work	00	JI005		02	01	
54	2016_17 Q4	JI020	Assessment of requirements at WTWs to operate effectively in	00	JI005		02	01	
55	2016_17 Q4	JR367	Service Reservoir Enhanced Security	01	JI005		04	07	
56	2016_17 Q4	JR460	Gravity II, McVeighs well to Old Park SR.	02	JI005		03	05	
57	2016_17 Q4	JI006	Panel Engineers Recommendation	00			01	03	
58	2016_17 Q4	JB662	Panel Engineer Recommendations - North Phase 1	00	JI006		01	03	
59	2016_17 Q4	JR420	Panel Engineer Recommendations - East Phase 1	00	JI006		01	03	
60	2016_17 Q4	JI007	WTW Effluent Quality	00			02	04	
61	2016_17 Q4	JI010	SEMD Surveys PC10 Water	01			02	04	
62	2016_17 Q4	JI015	Enhanced Site Security	01			06	04	
63	2016_17 Q4	JI017	Capital Investment - WPS Pump Efficiency	01			05	01	
64	2016_17 Q4	JI069	WPS Pump Efficiency Capital Investment Phase 1	00	JI017		05	01	
65	2016_17 Q4	JI024	MIMP West (Major Incident Mitigation Project West Region) Fre	00			03	08	
66	2016_17 Q4	JI025	MIMP South (Major Incident Mitigation Project South Region) Fr	00			03	08	
67	2016_17 Q4	JI026	MIMP North (Major Incident Mitigation Project North Region) Fr	00			03	08	
68	2016_17 Q4	JI027	MIMP Central (Major Incident Mitigation Project Central Region)	00			03	08	
69	2016_17 Q4	JI028	MIMP East (Major Incident Mitigation Project East Region) Free	00			03	08	
70	2016_17 Q4	JI029	Service Reservoir Assessments - Site Access	00			04	01	
71	2016_17 Q4	JI031	Offices & Depots -Water Regulation Compliance & Energy Effici	01			06	20	
72	2016_17 Q4	JI032	Water Treatment Sites - Water Regulation Compliance & Energ	01			02	01	
73	2016_17 Q4	JI035	Impounding Reservoir Future Use Assessment	00			01	03	
74	2016_17 Q4	JI037	Flood Resilience at NIW Water Supply Sites - Appraisal Study	02			02	01	
75	2016_17 Q4	JI038	Service Reservoir Security Phase 1	02			04	07	
76	2016_17 Q4	JI039	Water Supply West - Turbidity Monitor Upgrade	00			02	01	
77	2016_17 Q4	JI040	Recovering Energy Within the Water Distribution System	00			02	01	
78	2016_17 Q4	JI041	Hydro Power from Raw Water - Feasibility Study	00			02	01	
79	2016_17 Q4	JI043	Lough Bradan WTW & Altaveedan SR Sludge Lagoons	00			02	01	
80	2016_17 Q4	JI046	WP134 High Priority Water Mains Ph1	00			03	08	
81	2016_17 Q4	JI047	High Priority Watermains Phase 2 Work Package.	00			03	08	
82	2016_17 Q4	JI048	Appraisal of NIW infrastructure at Railways, DRD Road & Pipe E	00			03	23	
83	2016_17 Q4	JI050	Service Reservoir Rehab (Parent)	00			04	07	
84	2016_17 Q4	JA309	Tully Hill South SR Rehabilitation	00	JI050		04	07	
85	2016_17 Q4	JB722	Gortaclady SR Rehabilitation	00	JI050		04	07	
86	2016_17 Q4	JB728	Mormeal North SR Rehabilitation	06	JI050		04	07	
87	2016_17 Q4	JC398	North Garvagh SR Refurbishment	06	JI050		04	07	
88	2016_17 Q4	JF603	Benraw SR Rehabilitation	00	JI050		04	07	
89	2016_17 Q4	JF604	Castlehill SR Refurbishment	06	JI050		04	07	
90	2016_17 Q4	JF605	Seagahan CWB Refurbishment	06	JI050		04	07	
91	2016_17 Q4	JG078	Ballydougan Command 2B 3A 3B SR Rehabilitation	00	JI050		04	07	
92	2016_17 Q4	JG083	Ballyvally Old SR Rehabilitation	06	JI050		04	07	
93	2016_17 Q4	JG086	Cleomack SR Rehabilitation	06	JI050		04	07	
94	2016_17 Q4	JI009	Service Reservoir Rehab	00	JI050		04	07	
95	2016_17 Q4	JB710	Killylane CWB Refurbishment	03	JI009		04	07	
96	2016_17 Q4	JF597	Doochrock West SR Rehabilitation	00	JI009		04	07	
97	2016_17 Q4	JL758	Reservoir Rehabilitation Programme Phase 3	00	JI009		04	07	
98	2016_17 Q4	JR481	Ballyridley New SR Rehabilitation	03	JI009		04	07	
99	2016_17 Q4	JR482	Muldersleigh Hill SR Rehabilitation	03	JI009		04	07	
100	2016_17 Q4	JV866	Deehommed High Level SR Rehabilitation	03	JI009		04	07	
101	2016_17 Q4	JL777	Carmoney WTW - Old CWT Outlet Pipework	00	JI050		04	07	
102	2016_17 Q4	JL779	Carmoney CWB 1 and 2 Refurbishment	03	JI050		04	07	
103	2016_17 Q4	JL780	Carmoney CWB 3 and 4 Refurbishment	03	JI050		04	07	
104	2016_17 Q4	JL782	Tamneymore SR Rehabilitation	06	JI050		04	07	
105	2016_17 Q4	JN522	Omagh Phase 2 Service Reservoir Inner Works	04	JI050		03	07	
106	2016_17 Q4	JN523	Killybrack 1 SR Rehabilitation	00	JI050		04	07	
107	2016_17 Q4	JN524	Brookeborough Sr Rehabilitation	00	JI050		04	07	
108	2016_17 Q4	JN525	Botera SR Rehabilitation	00	JI050		04	07	
109	2016_17 Q4	JN531	Barravey SR Rehabilitation	00	JI050		04	07	
110	2016_17 Q4	JN533	Glenchuil SR Refurbishment	06	JI050		04	07	
111	2016_17 Q4	JN536	Killyclogher No.2 Sr Refurbishment	06	JI050		04	07	
112	2016_17 Q4	JN540	Lough Bradan CWB Rehabilitation	06	JI050		02	07	
113	2016_17 Q4	JP686	Rathmore SR Rehabilitation	00	JI050		04	07	
114	2016_17 Q4	JP689	Derrylin SR Rehabilitation	00	JI050		04	07	
115	2016_17 Q4	JR476	Lisnabreeny Road SR1 and SR2 Rehabilitation	03	JI050		04	07	
116	2016_17 Q4	JR486	Breda SR Rehabilitation	00	JI050		04	07	
117	2016_17 Q4	JR491	Ballygrainey SR Rehabilitation	00	JI050		04	07	
118	2016_17 Q4	JR492	Ballyhowne SR Rehabilitation	00	JI050		04	07	
119	2016_17 Q4	JR500	Ballywonard No.1 SR Rehabilitation	06	JI050		04	07	
120	2016_17 Q4	JV857	Newry West SR Rehabilitation	03	JI050		04	07	
121	2016_17 Q4	JV869	Senrty Hill SR Rehabilitation	00	JI050		04	07	
122	2016_17 Q4	JV872	Ballinliss Upper SR Rehabilitation	00	JI050		04	07	
123	2016_17 Q4	JV873	Newtown SR Rehabilitation	00	JI050		04	07	
124	2016_17 Q4	JV875	Sturgan SR Rehabilitation	00	JI050		04	07	
125	2016_17 Q4	JV876	Babylon Hill SR Rehabilitation	00	JI050		04	07	
126	2016_17 Q4	JV877	Camlough Derry Beg CWB Rehabilitation	00	JI050		04	07	
127	2016_17 Q4	JV878	Camly New SR Rehabilitation	00	JI050		04	07	
128	2016_17 Q4	JV879	Drumnahare SR Rehabilitation	00	JI050		04	07	
129	2016_17 Q4	JV882	Tullymurry Newry SR Rehabilitation	06	JI050		04	07	
130	2016_17 Q4	JV883	Mill Road SR Rehabilitation	06	JI050		04	07	
131	2016_17 Q4	JI051	Watermains Rehabilitation, New and Replacement incl FTS - Pr	00			03	08	
132	2016_17 Q4	JI052	WTWs Five Treatability Appraisal Studies	03			02	04	
133	2016_17 Q4	JI053	Water Mains Rehabilitation (Planned)	03			03	08	
134	2016_17 Q4	JA210	Tardree Zone WM Imps	02	JI053		03	08	
135	2016_17 Q4	JA283	A8 Belfast to Larne Dual Carriageway – Water main & sewer re	00	JI053		03	23	
136	2016_17 Q4	JB458	Dunore West Zone Watermain Improvements	00	JI053		03	08	
137	2016_17 Q4	JB460	Moyola Zone Watermain Improvements	00	JI053		03	08	
138	2016_17 Q4	JB679	The Glens Zone Watermain Improvements	00	JI053		03	08	
139	2016_17 Q4	JB680	Dungonnell Zone Watermain Improvements	00	JI053		03	08	
140	2016_17 Q4	JB687	Cookstown Phase 2 Watermain Improvements	00	JI053		03	08	
141	2016_17 Q4	JB688	Cookstown Phase 3 Watermain Improvements	00	JI053		03	08	
142	2016_17 Q4	JC349	Portballintrae Zone Wm Improvements	00	JI053		03	08	
143	2016_17 Q4	JC350	Ballycastle Zone Wm Improvements	00	JI053		03	08	
144	2016_17 Q4	JC351	Ballynahone Zone Wm Improvements	00	JI053		03	08	
145	2016_17 Q4	JC388	Rasharkin Zone Watermain Improvements Phase 2	00	JI053		03	08	
146	2016_17 Q4	JF593	Altmore Phase 2 Watermain Rehabilation	00	JI053		03	08	
147	2016_17 Q4	JL699	Limavady Zone Watermain Improvements	00	JI053		03	08	
148	2016_17 Q4	JN355	North Tyrone Zone Watermain Improvements	00	JI053		03	08	
149	2016_17 Q4	JN505	Omagh Watermain Improvements	00	JI053		03	08	
150	2016_17 Q4	JR321	Breda North Zone Watermain Improvements	00	JI053		03	08	
151	2016_17 Q4	JR437	South Belfast Urban	00	JI053		03	08	
152	2016_17 Q4	JR438	Newtownabbey Zone Watermain Improvements Phase 1	00	JI053		03	08	
153	2016_17 Q4	JR439	Carrickfergus Zone Watermain Improvements Phase 1	00	JI053		03	08	
154	2016_17 Q4	JR440	Newtownabbey Zone Watermain Improvements Phase 2	00	JI053		03	08	
155	2016_17 Q4	JR441	Ballysillan Zone Watermain Improvements	00	JI053		03	08	
156	2016_17 Q4	JR442	Ballywonard Zone Watermain Improvements	00	JI053		03	08	
157	2016_17 Q4	JR453	Ballygomartin North Phase 1 Watermain Improvements	00	JI053		03	08	
158	2016_17 Q4	JR454	Ballygomartin South Phase 1 Water Mains Improvements	00	JI053		03	08	
159	2016_17 Q4	JR455	Whiterock Phase 1 Watermains Improvements	00	JI053		03	08	
160	2016_17 Q4	JS226	Downpatrick Zone WM Imps	00	JI053		03	08	
161	2016_17 Q4	JS227	South Down Zone WM Imps	00	JI053		03	08	
162	2016_17 Q4	JS229	Mourne Coast Zone Watermain Improvements	00	JI053		03	08	
163	2016_17 Q4	JS293	North Down Bangor Phase 2 Watermain Improvements	00	JI053		03	08	
164	2016_17 Q4	JT252	Lisburn North Rural Phase 2 Watermain Improvements	00	JI053		03	08	
165	2016_17 Q4	JV024	Ballintemple Zone Watermain Improvements	00	JI053		03	08	
166	2016_17 Q4	JV707	Drumnahare Dist Imps	00	JI053		03	08	
167	2016_17 Q4	JV841	Fofanny Banbridge Zone Watermain Improvements Phase 2	00	JI053		03	08	
168	2016_17 Q4	JV844	WP101 Newry Phase2	00	JI053		03	08	
169	2016_17 Q4	JI054	Water Mains New and Renewed including FTS. (Unplanned)	06			03	23	
170	2016_17 Q4	JA291	Ballyclare Road Glengormley Watermains Upgrade	00	JI054		03	08	
171	2016_17 Q4	JC293	Ballinrees Central Zone Watermain Improvements	00	JI054		03	23	
172	2016_17 Q4	JC396	Chatham Road, Armoy, Watermain Replacement.	00	JI054		03	08	
173	2016_17 Q4	JF600	Carrive Rd Quilly Rd Mullaghbawn Watermain Replacement	03	JI054		03	23	
174	2016_17 Q4	JR474	Millmount Village Dundonald Water Main Upgrades	00	JI054		03	23	
175	2016_17 Q4	JS307	Drumarden Road Portaferry	03	JI054		03	08	
176	2016_17 Q4	JI058	Recreational Sites Appraisals for Public Access	04			06	03	
177	2016_17 Q4	JI059	Water Tower Reports demolition of seven	03			04	07	
178	2016_17 Q4	JI061	Impounding Reservoirs On-site Action Plans. (Reservoirs Bill)	03			01	03	
179	2016_17 Q4	JI062	Lead Pipe Replacement Programme	03			03	23	
180	2016_17 Q4	JI063	Inspection of Air Valves	03			03	08	
181	2016_17 Q4	JI065	PC13 Base Maintenance Water Treatment Works - North/ East	03			02	01	
182	2016_17 Q4	JI066	PC13 Base Maintenance Water Treatment Works - South/ West	03			02	01	
183	2016_17 Q4	JI067	Supply, installation and commissioning of Telemetry Scanning D	00			03	08	
184	2016_17 Q4	JI068	PC13 Base Maintenance Water Pumping Stations	03			05	01	
185	2016_17 Q4	JI071	Sub Metering at Selected Clean Water Sites	06			06	01	
186	2016_17 Q4	JI072	PC15 Water Mains Rehabilitation Framework	06			03	08	
187	2016_17 Q4	JI073	PC15 Water Mains Minor Works Framework.	06			03	23	
188	2016_17 Q4	JI074	Watermains Rehabilitation, New & Replacement Incorporating F	06			03	08	
189	2016_17 Q4	JI075	WPS Pump Efficiency Capital Investment Phase 2	00			05	01	
190	2016_17 Q4	JI076	Replacement Watermains 2014/15 - Reactive, Bundle 2	03			03	08	
191	2016_17 Q4	JI077	Sustainable Catchment Area Management Project (SCAMP Irel	03			01	03	
192	2016_17 Q4	JI078	PC15 Service Reservoir Rehabilitation (Parent Code)	00			04	07	
193	2016_17 Q4	JI079	PC15 Abstraction Monitoring	00			01	03	
194	2016_17 Q4	JI080	PC15 Service Reservoir Sample Taps	00			04	07	
195	2016_17 Q4	JI081	PC15 - PSCEMD (Water)	00			02	04	
196	2016_17 Q4	JI082	PC15 Lead Communication Pipe Replacement Programme	00			03	23	
197	2016_17 Q4	JI083	PC15 Trunk Main Rehabilitation Programme (Parent)	00			03	23	
198	2016_17 Q4	JV880	Camly Command SR Refurbishment	06	JI078		04	07	
199	2016_17 Q4	JF601	Ardglena Grove Area Dungannon Watermain Realignment	06	JI083		03	23	
200	2016_17 Q4	JR484	Gravity 1 / Antrim Rd Trunk Main valve replacements	06	JI083		03	23	
201	2016_17 Q4	JR487	Greater Belfast Trunkmain Valve Replacement	06	JI083		03	23	
202	2016_17 Q4	JI084	Water Treatment Works Treatability Study	06			02	01	
203	2016_17 Q4	JI086	PC15 Public Realm & Roads (Water)	00			03	23	
204	2016_17 Q4	JI087	PC15 Watermains Rehabilitation WP1 - Foffany/North Lisburn S	00			03	08	
205	2016_17 Q4	JI088	PC15 Watermains Rehabilitation WP 2: Forked Bridge Dunmurr	00			03	08	
206	2016_17 Q4	JI089	PC15 Watermains Rehabilitation WP 3: Killylane	00			03	08	
207	2016_17 Q4	JI090	PC15 Watermains Rehabilitation WP 4: Ballymena Ph1	00			03	08	
208	2016_17 Q4	JI092	PC15 Watermains Rehabilitation WP 6: Dungonnell	00			03	08	
209	2016_17 Q4	JI093	PC15 Watermains Rehabilitation WP 7: Carrickfergus	00			03	08	
210	2016_17 Q4	JI094	PC15 Watermains Rehabilitation WP 8: Belfast South Ph1	00			03	08	
211	2016_17 Q4	JI096	PC15 Watermains Rehabilitation WP 10: Belfast North	00			03	08	
212	2016_17 Q4	JI098	PC15 Watermains Rehabilitation WP 12: Watermains Re-lining	00			03	08	
213	2016_17 Q4	JI099	WIIM Networks Workpackages Development and Verification	04			06	20	
214	2016_17 Q4	JI100	PC15 Capital Maintenance Planning	04			06	20	
215	2016_17 Q4	JI101	PC15 Service Reservoir Condition Assessments.	04			04	20	
216	2016_17 Q4	JI102	PC15 PPRA Review of EP Water Mains Rehab Work Packages	04			03	20	
217	2016_17 Q4	JI104	PC15 Year 1 Base Maintenance - Chlorine Dosing Sites	00			04	01	
218	2016_17 Q4	JI105	WTW Condition Assessments	00			02	01	
219	2016_17 Q4	JI106	SR ByPass Schemes Phase 2	00			03	06	

Baseline Milestone Dates / Baseline Service Cost Allocation

Sort Ref	Baseline A1 Date	Baseline Project Approval Date	Baseline Start on Site Date	Baseline Beneficial Use Date	Baseline Regulatory sign off Date	Baseline Completion of Construction Date	Baseline End of Maintenance Period Date	Baseline Service Allocation Water Infrastructure	Baseline Service Allocation Water Non-Infrastructure	Baseline Service Allocation Sewerage Infrastructure	Baseline Service Allocation Sewerage Non-Infrastructure
1	11	12	13	14	15	16	17	18	19	20	21
2								0	0	100	0
3	26/02/2010	12/04/2010	31/05/2010	28/04/2011		28/04/2011	27/04/2012	0	0	0	0
4			01/04/2013	31/12/2013		31/03/2014	31/03/2015	0	100	0	0
15								60	40	0	0
17				31/03/2021				100	0	0	0
22				30/09/2019				33	67	0	0
31	25/10/2010							0	0	0	0
32								0	0	0	0
33								0	0	0	0
38	26/04/2006		14/01/2008	29/09/2008		29/09/2008	29/09/2009	0	0	0	0
42	01/10/2009	26/10/2009	07/12/2009	28/08/2015		28/02/2015	28/02/2016	82	18	0	0
43	11/12/2008	23/12/2008	14/09/2009	24/05/2011		24/05/2011	23/05/2012	0	0	0	0
49								0	0	0	0
50								0	0	0	0
52								14	86	0	0
53	19/02/2010	24/02/2010	06/04/2011	28/09/2012		28/09/2012	28/09/2013	0	0	0	0
54								0	100	0	0
55			28/01/2008	13/10/2010		13/10/2010	13/10/2011	0	0	0	0
56			08/07/2011	30/11/2014		30/12/2014	30/12/2014	100	0	0	0
57								100	0	0	0
58	15/02/2011	25/02/2011	14/12/2011	28/05/2012		28/05/2012	28/05/2013	0	0	0	0
59	15/02/2011	28/02/2011	24/10/2011	22/06/2012		22/06/2012	22/06/2013	0	0	0	0
60								0	100	0	0
61								0	0	0	0
62			30/08/2012	01/04/2013		01/04/2013	01/04/2014	0	0	0	0
63			31/03/2011	28/03/2014		28/03/2014	28/03/2015	0	0	0	0
64								0	100	0	0
65				30/03/2014				93	7	0	0
66	05/12/2011	08/12/2011	07/09/2011	18/06/2013		18/06/2013	18/06/2014	94	6	0	0
67				30/03/2015				99	1	0	0
68				30/03/2014				100	0	0	0
69				30/03/2015				99	1	0	0
70								0	100	0	0
71								0	0	0	0
72								0	100	0	0
73								0	0	0	0
74								0	0	0	0
75			09/05/2013	20/12/2016		20/12/2016	20/12/2017	0	100	0	0
77								0	100	0	0
78								0	100	0	0
79								0	0	0	0
83								0	100	0	0
94								0	0	0	0
97	02/02/2009	09/02/2009	06/04/2009	18/05/2009		18/05/2009	18/05/2010	0	0	0	0
132				31/12/2020				0	100	0	0
133				31/03/2014				94	6	0	0
134	15/06/2009	23/06/2009	12/08/2009	27/04/2011		27/04/2011	26/04/2012	0	0	0	0
136	02/04/2010	22/04/2010	11/06/2010	07/08/2012		07/08/2012	07/08/2013	0	0	0	0
137	02/04/2010	26/04/2010	20/09/2010	13/03/2012		13/03/2012	13/03/2013	0	0	0	0
138	16/09/2011	20/09/2011	26/09/2011	21/12/2012		21/12/2012	21/12/2013	0	0	0	0
139	05/07/2011	06/07/2011	25/03/2011	30/11/2012		30/11/2012	30/11/2013	0	0	0	0
140	16/09/2011	20/09/2011	03/05/2011	21/12/2012		21/12/2012	21/12/2013	0	0	0	0
141	17/10/2011	19/10/2011	27/05/2011	15/04/2013		15/04/2013	15/04/2014	0	0	0	0
142	26/09/2007	08/10/2007	05/11/2007	15/09/2008		15/09/2008	15/09/2009	0	0	0	0
143	26/02/2009	20/03/2009	06/04/2009	28/04/2011		28/04/2011	27/04/2012	0	0	0	0
144	26/09/2007	08/10/2007	21/04/2007	29/09/2008		29/09/2008	29/09/2009	0	0	0	0
145	19/05/2011	01/06/2011	19/01/2011	01/06/2012		01/06/2012	01/06/2013	0	0	0	0
147	04/11/2008	21/11/2008	29/12/2008	12/01/2011		12/01/2011	12/01/2012	0	0	0	0
148	12/03/2008	21/03/2008	11/08/2008	12/01/2011		12/01/2011	12/01/2012	0	0	0	0
149	17/10/2011	19/10/2011	02/08/2011	30/05/2013		30/05/2013	30/05/2014	0	0	0	0
150	02/04/2010	26/04/2010	15/06/2010	14/08/2012		14/08/2012	14/08/2013	0	0	0	0
151	07/09/2010	27/09/2010	10/11/2011	05/12/2011		05/12/2011	05/12/2012	0	0	0	0
152	03/06/2011	07/06/2011	01/02/2011	27/02/2014		27/02/2014	27/02/2015	0	0	0	0
153	19/05/2011	01/06/2011	19/01/2011	16/11/2012		16/11/2012	16/11/2013	0	0	0	0
154	05/07/2011	06/07/2011	02/02/2011	11/07/2012		11/07/2012	11/07/2013	0	0	0	0
155	05/07/2011	06/07/2011	19/01/2011	31/01/2013		31/01/2013	31/01/2014	0	0	0	0
156	22/04/2011	06/05/2011	17/01/2011	25/07/2012		25/07/2012	25/07/2013	0	0	0	0
157								0	0	0	0
158								0	0	0	0
159								0	0	0	0
160	21/07/2009	03/08/2009	07/06/2010	26/01/2012		26/01/2012	26/01/2013	0	0	0	0
161	21/07/2009	03/08/2009	27/09/2011	13/03/2012		13/03/2012	13/03/2013	0	0	0	0
162	21/07/2009	03/08/2009	07/06/2010	26/01/2012		26/01/2012	26/01/2013	0	0	0	0
163	17/10/2011	19/10/2011	02/08/2011	26/03/2013		26/03/2013	26/03/2014	0	0	0	0
164	03/11/2011	08/11/2011	02/08/2011	24/06/2013		24/06/2013	24/06/2014	0	0	0	0
165	17/11/2011	18/11/2011	23/05/2011	06/05/2013		06/05/2013	06/05/2014	0	0	0	0
166			01/06/2000	01/10/2001		01/10/2001	01/10/2002	0	0	0	0
167	24/05/2011	01/06/2011	12/01/2011	16/05/2012		16/05/2012	16/05/2013	0	0	0	0
168	03/11/2011	08/11/2011	02/08/2011	21/06/2013		21/06/2013	21/06/2014	0	0	0	0
169								99	0	1	0
171		22/04/2005	27/07/2009	28/01/2010		28/01/2010	28/01/2011	0	0	0	0
178								0	100	0	0
179								100	0	0	0
185								0	100	0	0
191								0	100	0	0
193								0	100	0	0
194								0	100	0	0
195								0	100	0	0
197								90	10	0	0
202								0	100	0	0
203								100	0	0	0

Baseline Expenditure Profile (£m 2012-13 prices) / Baseline Purpose Allocation

Sort Ref	Baseline CAPEX 2010-11 £m	Baseline CAPEX 2011-12 £m	Baseline CAPEX 2012-13 £m	Baseline CAPEX 2013-14 £m	Baseline CAPEX 2014-15 £m	Baseline CAPEX 2015-16 £m	Baseline CAPEX 2016-17 £m	Baseline CAPEX 2017-18 £m	Baseline CAPEX 2018-19 £m	Baseline CAPEX 2019-20 £m	Baseline CAPEX 2020-21 £m	Baseline CAPEX 2021-22 £m	Baseline CAPEX 2022-23 £m	Baseline CAPEX 2023-24 £m	Baseline Purpose Allocation Quality	Baseline Purpose Allocation Base	Baseline Purpose Allocation ESL	Baseline Purpose Allocation Growth
1	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
2	0.000	0.000	0.000	0.000	0.000	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
4	0.061	0.003	0.000	0.922	0.134	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0
15	0.000	0.000	0.000	0.248	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	20	0	80
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.225	0.873	0.000	0.000	0.000	0	0	0	100
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.929	2.505	0.000	0.000	0.000	0.000	0	42	0	58
31	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
32	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
33	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
38	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
42	5.022	5.651	3.382	1.105	3.559	3.238	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	4	0	96
43	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
52	0.000	0.000	0.000	2.628	3.745	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	13	87	0	0
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
54	0.000	0.000	0.000	0.000	0.000	0.000	1.016	0.970	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
56	0.000	0.000	0.000	1.492	1.288	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100
57	0.000	0.000	0.000	1.522	0.208	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0
58	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
59	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
60	0.000	0.000	0.000	0.000	0.000	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0
61	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
62	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
63	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
64	0.000	0.000	0.000	0.000	0.000	0.393	0.400	0.388	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0
65	0.000	0.443	2.080	1.567	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	81	0	19
66	0.000	0.202	0.993	0.751	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	91	0	9
67	0.000	0.141	0.004	1.091	0.449	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15	80	1	4
68	0.000	0.167	1.062	1.119	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	91	0	9
69	0.000	0.187	0.008	1.874	0.958	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	98	0	2
70	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.679	0.675	0.671	0.667	0.000	0.000	0.000	0	100	0	0
71	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
72	0.000	0.000	0.000	0.000	0.000	0.851	0.846	0.000	0.000	0.000	0.000	0.000	0.000	0.000	62	38	0	0
73	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
74	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
75	0.000	0.000	0.048	1.844	1.238	0.652	0.648	0.644	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0
77	0.000	0.000	0.000	0.000	0.000	0.416	0.413	0.411	0.000	0.000	0.000	0.000	0.000	0.000	0	0	100	0
78	0.000	0.000	0.000	0.000	0.000	0.000	0.404	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	100	0
79	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
83	0.000	0.000	0.553	2.444	1.987	2.575	2.560	2.544	2.529	2.514	2.499	0.000	0.000	0.000	0	100	0	0
94	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
97	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
132	0.000	0.000	0.000	0.000	0.000	0.247	0.000	0.000	0.000	0.000	1.497	0.000	0.000	0.000	100	0	0	0
133	0.000	0.000	0.000	17.014	21.785	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	37	47	3	13
134	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
136	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
137	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
138	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
139	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
140	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
141	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
142	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
143	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
144	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
145	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
147	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
148	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
149	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
151	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
152	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
153	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
154	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
155	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
156	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
157	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
158	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
159	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
161	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
162	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
163	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
164	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
165	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
166	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
167	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
168	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
169	0.000	0.000	0.000	3.474	2.733	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15	62	0	23
171	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
178	0.000	0.000	0.000	0.000	0.000	0.078	0.147	0.081	0.964	1.918	1.101	0.000	0.000	0.000	0	100	0	0
179	0.000	0.000	0.000	0.000	0.000	0.924	0.919	0.913	0.908	0.902	0.897	0.000	0.000	0.000	100	0	0	0
185	0.000	0.000	0.000	0.000	0.000	0.460	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	100	0
191	0.000	0.000	0.000	0.000	0.000	0.605	0.601	0.598	0.687	0.683	0.587	0.000	0.000	0.000	11	48	38	4
193	0.000	0.000	0.000	0.000	0.000	0.047	0.046	0.046	0.183	0.182	0.181	0.000	0.000	0.000	27	11	27	36
194	0.000	0.000	0.000	0.000	0.000	0.480	0.477	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0
195	0.000	0.000	0.000	0.000	0.000	0.000	0.919	0.913	0.908	0.000	0.000	0.000	0.000	0.000	100	0	0	0
197	0.000	0.000	0.000	0.000	0.000	1.054	1.429	1.420	1.883	1.871	1.023	0.000	0.000	0.000	0	60	6	34
202	0.000	0.000	0.000	0.000	0.000	0.151	0.150	0.186	0.000	0.000	0.000	0.000	0.000	0.000	69	31	0	0
203	0.000	0.000	0.000	0.000	0.000	1.036	1.030	1.024	1.018	1.011	1.005	0.000	0.000	0.000	0	100	0	0

Current Actual or Projected Milestone Dates

Sort Ref	Current Actual or Projected A1 Date	Current Actual or Projected Project Approval Date	Current Actual or Projected Start on Site Date	Current Actual or Projected Beneficial Use Date	Current Actual or Projected Regulatory sign off Date	Current Actual or Projected Completion of Construction Date	Current Actual or Projected End of Maintenance Period Date
1	40	41	42	43	44	45	46
2	29/01/2016	29/02/2016	07/03/2016	24/03/2016			
3	26/02/2010	12/04/2010	31/05/2010	28/04/2011		10/10/2011	
4	08/07/2013	13/08/2013	29/01/2014	05/12/2014		25/03/2015	14/09/2015
5	13/11/2013	19/11/2013	06/01/2014	10/06/2015		29/05/2015	
6	05/08/2013	06/08/2013	18/02/2013	23/03/2017		08/12/2014	
7	27/05/2015	29/05/2015					
8	02/03/2015	04/03/2015	16/03/2015	23/02/2016			
9	06/01/2017	09/01/2017					
11	30/06/2016	04/07/2016	21/07/2016				
15	16/02/2015	18/02/2015	01/08/2016			26/06/2017	
16	05/08/2013	12/08/2013	01/09/2014	23/06/2015		30/03/2015	08/12/2015
17	16/03/2015	18/03/2015	15/09/2015	21/09/2016			
18	13/05/2014	21/05/2014	09/09/2013	29/06/2015		30/03/2015	
19	30/11/2016	05/12/2016					
21	30/03/2015	01/04/2015					
22	28/01/2016	02/02/2016					
23	24/09/2014	03/10/2014	27/10/2014	29/06/2015			
24	30/09/2014	03/10/2014	01/12/2014	30/03/2015		17/04/2015	
26	28/10/2016	01/11/2016	05/12/2016				
27	17/10/2016	24/10/2016	31/10/2016				
29	14/10/2016	17/10/2016	01/07/2016				
31	25/10/2010	19/11/2010	01/08/2016			30/09/2017	
34	22/10/2012	25/10/2012	07/05/2013	30/07/2013		28/05/2013	
35	30/06/2014	09/07/2014	03/11/2014	29/06/2015			
37	04/07/2016	04/07/2016	21/07/2016				
38	26/04/2006						
39	04/07/2016	04/07/2016	21/07/2016				
42	01/10/2009	26/10/2009		28/08/2015			
43	11/12/2008	23/12/2008	14/09/2009	24/05/2011		23/07/2012	
45	12/06/2014	24/06/2014					
47	01/10/2015	05/10/2015	02/11/2015	07/03/2016		31/03/2016	04/04/2016
48	03/02/2016	29/02/2016					
49	07/01/2013	14/01/2013					
50	03/02/2014	10/02/2014	01/06/2015			18/12/2015	
51	17/12/2013	19/12/2013	06/01/2014			26/01/2015	
53	19/02/2010	24/02/2010	21/03/2011	01/10/2013		26/08/2013	
54	23/11/2015	23/11/2015					
55	20/11/2007	17/12/2007	07/12/2009	12/10/2010		02/12/2013	
56	13/12/2013	13/12/2013	01/01/2014	28/11/2014		02/12/2014	23/06/2015
58	15/02/2011	25/02/2011	22/07/2013	23/10/2015		22/09/2015	
59	15/02/2011	28/02/2011	10/06/2013	19/05/2015		22/04/2015	
60	28/10/2015	17/11/2015	04/01/2016	01/03/2017			
61	30/05/2014	20/06/2014					
62	23/02/2012	28/02/2012	30/08/2012	11/09/2013		12/09/2013	
63	29/11/2010	12/01/2011					
64	22/07/2014	31/07/2014	10/02/2015	28/02/2017			
65	16/10/2012	24/10/2012	05/09/2011	14/02/2014		21/07/2014	
66	05/12/2011	08/12/2011	07/09/2011	24/01/2014		25/09/2013	
67	12/12/2012	20/12/2012	02/06/2011	18/08/2014		18/09/2014	
68	15/10/2012	25/10/2012	05/05/2011	28/03/2014		26/06/2014	
69	12/12/2012	20/12/2012	04/08/2011	09/02/2015		28/08/2014	
70	17/02/2014	21/02/2014					
71	01/10/2015	09/10/2015					
72	24/06/2014	17/07/2014					
74	15/05/2014	21/05/2014		04/04/2017		31/03/2016	
75	04/03/2014	13/03/2014	03/05/2016			31/08/2017	
76	15/05/2014	30/05/2014	02/03/2015	19/06/2015			26/08/2016
78	04/03/2015	06/03/2015					
79	03/09/2015	07/09/2015	23/12/2015			28/07/2017	
80	27/08/2013	29/08/2013	01/02/2013	31/08/2015		26/12/2014	
81	19/08/2013	29/08/2013	14/02/2013	31/12/2014		26/06/2014	
84	05/02/2016	05/02/2016	22/08/2016	15/12/2016		15/12/2016	
85	02/02/2016	02/02/2016	31/01/2017	28/03/2017		20/03/2017	
86	14/11/2016	14/11/2016					
87	14/11/2016	14/11/2016				30/03/2018	
88	18/01/2016	18/01/2016	20/06/2016	24/08/2016		09/02/2017	
89	14/11/2016	14/11/2016				09/08/2017	
90	14/11/2016	14/11/2016	01/05/2017			29/09/2017	
91	25/04/2014	02/05/2014	02/06/2014	02/12/2015		30/07/2015	16/12/2015
92	10/03/2015	10/03/2015	10/12/2015	15/04/2016		18/03/2016	09/09/2016
93	11/11/2016	11/11/2016				02/10/2017	
94	24/01/2013	30/01/2013					
95	04/08/2014	22/09/2014	08/12/2014	15/05/2015		30/06/2015	
96	04/07/2014	17/07/2014	08/12/2014	21/04/2015		21/04/2015	20/11/2015
97	02/02/2009	09/02/2009					
98	04/08/2014	22/09/2014	01/12/2014	30/03/2015		31/03/2015	
99	04/08/2014	22/09/2014	18/11/2014	30/03/2015		31/03/2015	20/11/2015
100	04/08/2014	22/09/2014	09/03/2015	27/05/2015		08/05/2015	
101	02/09/2015	02/09/2015	01/04/2015	09/05/2016		06/05/2016	21/07/2016
102	26/11/2014	15/01/2015	18/04/2016	21/10/2016		21/10/2016	
103	26/11/2014	15/01/2015	07/11/2016			11/07/2017	
104	14/11/2016	14/11/2016	01/05/2017			13/09/2017	
105	03/02/2015	03/02/2015	01/06/2015	31/07/2015		31/05/2016	
106	10/03/2015	30/04/2015	18/01/2016	29/04/2016		06/05/2016	25/11/2016
107	10/03/2015	10/03/2015	22/07/2015	18/11/2015		30/10/2015	21/11/2016
108	10/03/2015	10/03/2015					
109	02/02/2016	02/02/2016	24/10/2016	16/02/2017		23/02/2017	
110	11/11/2016	11/11/2016				16/08/2017	
111	11/11/2016	11/11/2016					
112	11/11/2016	11/11/2016					
113	09/04/2015	09/04/2015	20/07/2015	20/10/2015		30/10/2015	01/11/2016
114	18/01/2016	18/01/2016	06/02/2017			29/03/2017	
115	25/11/2015	10/12/2015	04/01/2016	28/10/2016		18/11/2016	
116	27/04/2015	30/04/2015	12/10/2015	02/06/2016		31/05/2016	01/08/2016
117	18/01/2016	26/01/2016	13/06/2016	14/12/2016		27/01/2017	
118	18/01/2016	18/01/2016	13/06/2016			04/05/2017	
119	14/11/2016	14/11/2016				07/11/2017	
120	11/11/2013	13/11/2013					
121	09/04/2015	09/04/2015	02/11/2015	15/12/2015		18/04/2016	11/08/2016
122	12/11/2015	12/11/2015					
123	18/01/2016	18/01/2016	10/08/2016	09/12/2016		12/01/2017	
124	02/02/2016	02/02/2016	12/09/2016	13/02/2017		20/02/2017	
125	05/02/2016	05/02/2016	06/06/2016	08/07/2016		01/07/2016	08/08/2016
126	05/02/2016	05/02/2016	21/11/2016			12/04/2017	
127	08/02/2016	08/02/2016	16/08/2016	23/09/2016		23/09/2016	18/01/2017
128	16/02/2016	29/02/2016					
129	14/11/2016	14/11/2016					
130	11/11/2016	11/11/2016					
131	01/03/2013	11/03/2013					
134	15/06/2009	23/06/2009					
135	31/01/2013	05/02/2013					
136	02/04/2010	22/04/2010	11/06/2010	07/08/2012		19/07/2013	
137	02/04/2010	26/04/2010	20/09/2010	13/03/2012		30/06/2014	
138	16/09/2011	20/09/2011	26/09/2011	28/03/2013		25/03/2013	04/11/2014
139	05/07/2011	06/07/2011	02/04/2012	06/03/2013		06/06/2014	
140	16/09/2011	20/09/2011	03/05/2011	01/08/2014		18/12/2012	04/11/2014
141	17/10/2011	19/10/2011	27/05/2011	08/10/2013		12/04/2013	04/11/2014
142	26/09/2007	08/10/2007	05/01/2009	03/03/2010		26/07/2010	
143	26/02/2009	20/03/2009					
144	26/09/2007	08/10/2007					
145	19/05/2011	01/06/2011	02/04/2012	26/03/2013		27/02/2013	04/11/2014
146	11/06/2013	24/06/2013	10/12/2012	30/09/2014		25/08/2014	
147	04/11/2008	21/11/2008	29/12/2008	03/03/2010		15/11/2010	
148	12/03/2008	21/03/2008	11/08/2008	11/01/2011		29/06/2009	
149	17/10/2011	19/10/2011	02/08/2011	26/03/2013		26/03/2013	
150	02/04/2010	26/04/2010	01/03/2010	27/11/2012		06/11/2012	27/11/2012
151	07/09/2010	27/09/2010	10/11/2011	19/09/2011		19/01/2012	05/12/2011
152	03/06/2011	07/06/2011	01/02/2011	27/08/2014		24/06/2014	
153	19/05/2011	01/06/2011	01/04/2013	26/07/2013		30/10/2013	
154	05/07/2011	06/07/2011	02/02/2011	27/08/2014		02/02/2011	
155	05/07/2011	06/07/2011	19/01/2011	14/01/2014		26/03/2014	
156	22/04/2011	06/05/2011	02/04/2012	08/01/2014		28/10/2013	
157	07/10/2013	16/10/2013	01/04/2012	29/06/2015		30/03/2015	
158	07/10/2013	21/10/2013	01/04/2012			31/03/2015	
159	08/10/2013	16/10/2013	01/06/2011	30/03/2015		25/03/2015	01/07/2015
160	21/07/2009	03/08/2009	08/06/2010	13/05/2011		26/03/2013	26/01/2012
161	21/07/2009	03/08/2009	27/09/2010	12/03/2012		19/09/2011	01/07/2015
162	21/07/2009	03/08/2009	08/06/2010	02/08/2011		26/03/2013	26/01/2012
163	17/10/2011	19/10/2011	02/08/2011	27/08/2014		23/04/2013	
164	03/11/2011	08/11/2011	02/08/2011	14/03/2014		24/06/2014	
165	17/11/2011	18/11/2011	23/05/2011	08/10/2013		06/05/2013	
166			24/09/2010	19/04/2011		27/05/2011	
167	24/05/2011	01/06/2011	12/01/2011	06/03/2013		16/10/2013	
168	03/11/2011	08/11/2011	02/08/2011	29/06/2015		24/06/2014	
170	01/07/2013	16/07/2013	01/08/2013	29/08/2014		19/12/2013	04/11/2014
171		22/04/2005	27/07/2009	27/01/2010		15/11/2010	
172	05/08/2014	12/08/2014	30/09/2014	01/07/2015			01/07/2015
173	16/07/2014	17/07/2014	04/08/2014	30/03/2015			01/07/2015
174	04/06/2015	04/06/2015					
175	24/09/2014	03/10/2014	30/10/2014	03/04/2017			
176	04/02/2016	05/02/2016					
179	13/03/2014	25/03/2014					
180	04/03/2014	13/03/2014					
181	27/06/2014	22/07/2014	02/11/2015				
182	27/06/2014	22/07/2014					
183	19/11/2013	29/11/2013					
184	02/11/2016	04/11/2016					
188	23/02/2016	29/02/2016					
190	24/11/2014	27/11/2014	05/01/2015	03/08/2015		31/03/2016	
191	13/03/2015	18/03/2015					
194	29/04/2016	03/05/2016					
196	21/08/2015	24/08/2015					
198	18/08/2016	18/08/2016	04/10/2016	17/01/2017		02/02/2017	15/02/2017
199	15/01/2016	15/01/2016	01/03/2016	30/03/2016		01/04/2016	
200	11/08/2015	14/09/2015	05/10/2015			31/03/2017	
201	07/06/2016	09/06/2016	05/09/2016	10/03/2017		31/03/2017	
204	04/06/2015	16/06/2015	02/02/2015				
205	03/11/2015	05/11/2015	01/09/2015			31/03/2016	
206	07/05/2015	12/05/2015	02/02/2015			24/02/2017	
207	19/06/2015	22/06/2015	04/02/2015	23/03/2017			
208	07/05/2015	12/05/2015	02/02/2015				
209	03/11/2015	05/11/2015	01/09/2015			31/03/2016	
210	03/11/2015	05/11/2015	01/09/2015			31/03/2016	
211	03/11/2015	05/11/2015	01/09/2015			31/03/2016	
213	30/04/2015	04/06/2015					
214	01/05/2015	22/06/2015					
215	25/06/2015	26/06/2015					
216	01/05/2015	03/07/2015					
217	11/04/2016	18/04/2016	02/01/2017				

Current Actual or Projected Service Cost Allocation / Current Actual or Projected Capital Expenditure Profile (£m money of the day)

Sort Ref	Service Allocation Water Infrastructure	Service Allocation Water Non-Infrastructure	Service Allocation Sewerage Infrastructure	Service Allocation Sewerage Non-Infrastructure	CAPEX Year to date £m	CAPEX 2010-11 £m	CAPEX 2011-12 £m	CAPEX 2012-13 £m	CAPEX 2013-14 £m	CAPEX 2014-15 £m	CAPEX 2015-16 £m	CAPEX 2016-17 £m	CAPEX 2017-18 £m	CAPEX 2018-19 £m	CAPEX 2019-20 £m	CAPEX 2020-21 £m	CAPEX 2021-22 £m	CAPEX 2022-23 £m	CAPEX 2023-24 £m
1	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
1	0	0	70	30	0.000	0.000	0.000	0.000	0.035	-0.010	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.015	0.247	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0	100	0	0	0.000	0.847	0.127	0.000	-0.001	0.000	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0	100	0	0	0.000	0.061	0.003	0.000	0.228	1.005	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0	100	0	0	0.000	0.000	0.000	0.000	0.011	0.062	0.058	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	89	11	0	0	0.156	0.000	0.000	0.267	1.953	0.715	-0.003	0.156	0.003	0.000	0.000	0.000	0.000	0.000	0.000
7	100	0	0	0	0.005	0.000	0.000	0.000	0.000	0.015	0.061	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	100	0	0	0	0.003	0.000	0.000	0.000	0.000	0.368	0.465	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	58	0	42	0	0.089	0.000	0.000	0.000	0.000	0.000	0.049	0.089	0.169	0.169	0.031	0.000	0.000	0.000	0.000
10	100	0	0	0	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.200	0.800	0.500	0.300	0.000	0.000	0.000	0.000
11	100	0	0	0	1.422	0.000	0.000	0.000	0.000	0.000	0.000	1.422	1.154	0.376	0.000	0.000	0.000	0.000	0.000
12	0	100	0	0	0.169	0.000	0.000	0.000	0.000	0.000	0.000	0.169	0.082	0.000	0.000	0.000	0.000	0.000	0.000
13	100	0	0	0	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.150	1.250	0.600	0.000	0.000	0.000	0.000
14	100	0	0	0	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.150	1.250	0.600	0.000	0.000	0.000	0.000
15	0	100	0	0	0.218	0.000	0.000	0.000	0.021	0.000	0.006	0.218	0.436	0.005	0.000	0.000	0.000	0.000	0.000
16	0	100	0	0	0.002	0.000	0.000	0.005	0.015	0.205	0.016	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	100	0	0	0	0.222	0.000	0.000	0.000	0.015	0.047	1.491	0.222	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	100	0	0	0	0.030	0.000	0.000	0.000	0.080	1.237	0.081	0.030	0.001	0.000	0.000	0.000	0.000	0.000	0.000
19	0	100	0	0	0.020	0.000	0.000	0.000	0.006	-0.002	0.015	0.020	0.323	0.000	0.000	0.000	0.000	0.000	0.000
20	100	0	0	0	0.000	0.000	0.000	0.000	0.003	0.022	-0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	100	0	0	0	0.018	0.000	0.000	0.000	0.016	-0.002	0.115	0.018	0.004	0.000	0.000	0.000	0.000	0.000	0.000
22	0	100	0	0	0.076	0.000	0.000	0.000	0.000	0.038	0.000	0.076	0.092	2.026	2.027	0.000	0.000	0.000	0.000
23	100	0	0	0	0.040	0.000	0.000	0.000	0.000	0.385	0.021	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	100	0	0	0	-0.008	0.000	0.000	0.000	0.000	0.048	0.000	-0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	100	0	0	0	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	100	0	0	0	1.111	0.000	0.000	0.000	0.000	0.000	0.000	1.111	0.625	0.000	0.000	0.000	0.000	0.000	0.000
27	100	0	0	0	0.963	0.000	0.000	0.000	0.000	0.000	0.000	0.963	0.928	0.174	0.000	0.000	0.000	0.000	0.000
28	100	0	0	0	0.180	0.000	0.000	0.000	0.000	0.000	0.000	0.180	0.500	1.285	0.000	0.000	0.000	0.000	0.000
29	100	0	0	0	0.575	0.000	0.000	0.000	0.000	0.000	0.000	0.575	1.420	0.752	0.000	0.000	0.000	0.000	0.000
30	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.053	0.000	0.000	0.000	0.000	0.000	0.000
31	0	100	0	0	0.803	0.007	0.004	0.018	-0.017	0.000	0.000	0.803	0.395	0.000	0.000	0.000	0.000	0.000	0.000
32	0	100	0	0	-0.003	0.000	0.000	0.000	0.003	0.000	0.000	-0.003	0.000	0.000	0.000	0.000	0.935	0.000	0.000
33	0	100	0	0	-0.003	0.000	0.000	0.000	0.003	0.000	0.000	-0.003	0.000	0.000	0.000	0.000	0.835	0.000	0.000
34	50	50	0	0	0.002	0.000	0.000	0.000	0.008	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	100	0	0	0	-0.050	0.000	0.000	0.000	0.000	0.275	0.000	-0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000
36	100	0	0	0	0.207	0.000	0.000	0.000	0.000	0.000	0.000	0.207	0.010	0.000	0.000	0.000	0.000	0.000	0.000
37	100	0	0	0	1.515	0.000	0.000	0.000	0.000	0.000	0.000	1.515	1.218	0.000	0.000	0.000	0.000	0.000	0.000
38	100	0	0	0	0.000	0.000	0.000	0.138	0.027	0.000	-0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
39	100	0	0	0	1.554	0.000	0.000	0.000	0.000	0.000	0.000	1.554	1.228	0.050	0.000	0.000	0.000	0.000	0.000
40	100	0	0	0	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.031	0.000	0.000	0.000	0.000	0.000	0.000
41	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.150	1.250	0.600	0.000	0.000	0.000	0.000
42	82	18	0	0	0.106	5.022	5.787	4.342	0.245	2.059	2.916	0.106	0.000	0.000	0.000	0.000	0.000	0.000	0.000
43	90	10	0	0	0.000	6.349	3.025	-0.352	0.017	0.146	0.183	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
44	100	0	0	0	-0.007	0.000	0.000	0.000	0.005	0.015	0.000	-0.007	0.190	0.000	0.000	0.000	0.000	0.000	0.000
45	100	0	0	0	0.000	0.000	0.000	0.000	-0.009	0.009	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
46	100	0	0	0	0.000	0.000	0.000	0.000	0.001	0.002	-0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
47	0	50	0	50	0.000	0.000	0.000	0.000	0.000	0.000	0.626	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
48	75	0	25	0	0.030	0.000	0.000	0.000	0.000	0.000	0.010	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000
49	89	11	0	0	0.000	0.000	0.000	0.424	-0.084	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	86	14	0	0	0.143	0.000	0.000	0.000	0.000	0.000	0.884	0.143	0.005	0.000	0.000	0.000	0.000	0.000	0.000
51	100	0	0	0	0.000	0.000	0.000	0.000	0.250	0.895	0.011	0.000	0.000	0.000	0.000	0.600	0.000	0.000	0.000
52	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
53	0	100	0	0	-0.001	0.002	2.289	1.033	-0.142	0.113	0.132	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
54	0	100	0	0	0.368	0.000	0.000	0.006	0.027	0.014	0.036	0.368	2.195	0.000	0.000	0.000	0.000	0.000	0.000
55	0	100	0	0	0.000	0.214	0.177	0.000	0.002	0.059	0.044	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000
56	100	0	0	0	-0.001	0.000	0.000	0.000	1.628	3.398	-0.033	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
57	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
58	100	0	0	0	0.007	0.025	0.748	0.256	0.589	0.901	0.344	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000
59	100	0	0	0	0.021	0.124	1.034	0.142	0.769	0.856	0.067	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000
60	0	100	0	0	0.122	0.000	0.000	0.003	0.007	0.003	0.047	0.122	0.002	0.000	0.000	0.000	0.000	0.000	0.000
61	0	100	0	0	0.007	0.000	0.000	0.000	0.067	0.071	0.535	0.007	0.800	0.900	0.000	0.000	0.000	0.000	0.000
62	0	100	0	0	-0.032	0.000	0.037	1.681	1.517	0.152	-0.001	-0.032	0.004	0.000	0.000	0.000	0.000	0.000	0.000
63	0	100	0	0	0.000	0.020	0.022	0.018	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
64	0	100	0	0	0.064	0.000	0.000	0.000	0.030	0.053	0.432	0.064	0.002	0.000	0.000	0.000	0.000	0.000	0.000
65	94	6	0	0	-0.046	0.000	0.443	1.386	1.770	0.049	0.001	-0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000
66	100	0	0	0	0.002	0.000	0.202	1.056	0.661	0.235	0.000	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000
67	100	0	0	0	0.000	0.000	0.141	0.428	1.037	0.135	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
68	100	0	0	0	0.000	0.000	0.167	0.890	0.356	0.491	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
69	100	0	0	0	0.000	0.000	0.187	0.331	1.967	0.343	0.066	0.000	0.100	0.000	0.000	0.000	0.000	0.000	0.000
70	0	100	0	0	0.094	0.000	0.000	0.000	0.050	0.082	0.688	0.094	0.015	0.774	0.540	0.515	1.178	0.000	0.000
71	0	100	0	0	0.026	0.000	0.000	0.000	0.010	0.015	0.026	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000
72	0	100	0	0	0.028	0.000	0.000	0.004	0.028	0.000	0.022	0.028	0.027	0.000	0.000	0.000	0.000	0.000	0.000
73	100	0	0	0	0.000	0.000	0.000	0.000	0.016	0.054	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
74	0	100	0	0	0.118	0.000	0.000	0.006	0.025	0.000	0.006	0.118	0.004	0.000	0.000	0.000	0.000	0.000	0.000
75	0	100	0	0	1.356	0.000	0.000	0.003	0.082	0.446	0.492	1.356	1.091	0.000	0.000	0.000	0.000	0.000	0.000
76	0	100	0	0	-0.003	0.000	0.000	0.004	0.013	0.350	0.093	-0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000
77	0	100	0	0	-0.002	0.000	0.000	0.000	0.025	0.015	0.003	-0.002	0.002	0.000	0.000	0.000	1.481	0.000	0.000
78	0	100	0	0	0.001	0.000	0.000	0.000	0.023	0.026	0.009	0.001	0.071	0.000	0.000	0.000	0.000	0.000	0.000
79	0	100	0	0	0.000	0.000	0.000	0.000	0.008	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80	100	0	0	0	0.001	0.000	0.000	0.019	0.634	0.635	0.234	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
81	100	0	0	0	0.000	0.000	0.000	0.020	0.702	0.252	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
82	80	0	20	0	1.697	0.000	0.000	0.000	0.018	0.012	0.493	1.697	0.700	0.722	0.748	0.387	0.000	0.000	0.000
83	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
84	0	100	0	0	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85	0	100	0	0	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.001	0.000	0.000	0.000	0.000	0.000	0.000
86	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.073	0.000	0.000	0.000	0.000	0.000	0.000
87	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.094	0.000	0.000	0.000	0.000	0.000	0.000
88	0	100	0	0	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.001	0.000	0.000	0.000	0.000	0.000	0.000
89	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.156	0.000	0.000	0.000	0.000	0.000	0.000
90	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.161	0.000	0.000	0.000	0.000	0.000	0.000
91	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.639	0.330	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92	0	100	0	0	-0.016	0.000	0.000	0.000	0.000	0.000	0.072	-0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000
93	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.096	0.000	0.000	0.000	0.000	0.000	0.000
94	0	100	0	0	0.100	0.000	0.000	0.003	0.105	0.100	0.091	0.100	0.100	0.020	0.000	0.000	0.000	0.000	0.000
95	0	100	0	0	-0.027	0.000	0.000	0.000	0.000	0.127	0.152	-0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000
96	0	100	0	0	-0.024	0.000	0.000	0.000	0.000	0.067	0.108	-0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97	0	100	0	0	0.000	0.011	-0.050	0.000	0.000	0.000	-0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
98	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.255	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
99	0	100	0	0	-0.021	0.000	0.000	0.000	0.000	0.130	0.022	-0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.044	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
101	0	100	0	0	-0.001	0.000	0.000	0.000	0.000	0.009	0.137	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	0	100	0	0	0.259	0.000	0.000	0.000	0.000	0.000	0.000	0.259	0.005	0.000	0.000	0.000	0.000	0.000	0.000
103	0	100	0	0	0.210	0.000	0.000	0.000	0.000	0.000	0.000	0.210	0.148	0.000	0.000	0.000	0.000	0.000	0.000
104	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.233	0.000	0.000	0.000	0.000	0.000	0.000
105	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.065	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000
106	0	100	0	0	0.003	0.000	0.000	0.000	0.000	0.000	0.135	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
108	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
109	0	100	0	0	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000	0.000	0.000	0.000
111	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.116	0.000	0.000	0.000	0.000	0.000	0.000
112	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.097	0.000	0.000	0.000	0.000	0.000	0.000
113	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
114	0	100	0	0	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.001	0.000	0.000	0.000	0.000	0.000	0.000
115	0	100	0	0	0.312	0.000	0.000	0.000	0.000	0.000	0.191	0.312	0.000	0.000	0.000	0.000	0.000	0.000	0.000
116	0	100	0	0	0.081	0.000	0.000	0.000	0.000	0.000	0.518	0.081	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117	0	100	0	0	0.181	0.000	0.000	0.000	0.000	0.000	0.000	0.181	0.000	0.000	0.000	0.000	0.000	0.000	0.000
118	0	100	0	0	0.068	0.000	0.000	0.000	0.000	0.000	0.000	0.068	0.020	0.000	0.000	0.000	0.000	0.000	0.000
119	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.324	0.000	0.000	0.000	0.000	0.000	0.000
120	0	100	0	0	0.140	0.000	0.000	0.000	0.000	0.000	0.000	0.140	0.001	0.000	0.000	0.000	0.000	0.000	0.000
121	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.079	0.000	0.000	0.000	0.000	0.000
123	0	100	0	0	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000
124	0	100	0	0	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125	0	100	0	0	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000
126	0	100	0	0	0.075	0.000	0.000	0.000	0.000	0.000	0.000	0.075	0.004	0.000	0.000	0.000	0.000	0.000	0.000
127	0	100	0	0	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000
128	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.127	0.000	0.000	0.000	0.000	0.000	0.000
129	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.000
130	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.000	0.000	0.000	0.000	0.000	0.000
131	89	11	0	0	0.038	0.000	0.000	0.000	1.742	1.872	1.811	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000
132	0	100	0	0	0.068	0.000	0.000	0.000	0.112	0.075	0.376	0.068	0.011	0.000	1.634	0.000	0.000	0.000	0.000
133	94	6	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
134	97	3	0	0	0.005	2.081	1.117	0.550	0.351	0.009	0.019	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135	90	0	10	0	0.064	0.000	0.000	0.006	0.121	0.137	0.014	0.064	0.012	0.000	0.000	0.000	0.000	0.000	0.000
136	100	0	0	0	0.003	2.598	0.511	-0.023	0.122	0.020	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000
137	95	5	0	0	-0.001	1.568	2.554	0.726	0.180	0.135	0.018	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
138	76	24	0	0	-0.052	0.000	0.148	0.719	-0.050	0.000	-0.009	-0.052	0.000	0.000	0.000	0.000	0.000	0.000	0.000
139	98	2	0	0	0.000	0.000	2.479	0.973	0.060	0.003	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140	93	7	0	0	0.004	0.000	1.653	1.945	0.131	0.072	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000
141	93	7	0	0	0.000	0.000	2.217	1.517	0.038	0.024	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
142	100	0	0	0	-0.001	0.036	-0.031	-0.006	0.037	0.000	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
143	100	0	0	0	0.000	1.303	0.062	-0.020	0.001	-0.053	-0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
144	100	0	0	0	0.000	0.019	0.041	0.000	-0.027	0.000	-0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145	95	5	0	0	0.000	0.277	1.800	0.300	-0.055	-0.002	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
146	100	0	0	0	-0.058	0.000	0.000	0.276	1.867	0.740	0.065	-0.058	0.000	0.000	0.000	0.000	0.000	0.000	0.000
147	100	0	0	0	0.000	0.240	0.000	0.000	0.000	0.000	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
148	100	0	0	0	0.001	0.025	-0.027	-0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
149	100	0	0	0	0.000	0.000	0.844	0.409	0.169	0.000	-0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150	98	2	0	0	-0.150	2.874	0.996	0.764	0.200	0.000	0.000	-0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000
151	100	0	0	0	0.000	0.432	0.278	0.092	-0.052	0.000	-0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
152	97	3	0	0	0.000	0.087	0.996	1.067	0.761	0.024	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
153	93	7	0	0	0.051	0.265	1.863	0.770	0.065	0.240	0.045	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000
154	98	2	0	0	0.000	0.162	1.420	1.408	1.498	0.211	-0.132	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155	98	2	0	0	0.000	0.247	2.160	2.062	1.207	-0.003	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
156	87	13	0	0	0.000	0.077	1.090	0.630	0.833	0.064	-0.236	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000
157	100	0	0	0	0.000	0.000	0.109	0.018	0.705	1.586	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
158	100	0	0	0	0.000	0.000	0.116	0.025	0.731	1.965	0.225	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
159	100	0	0	0	0.017	0.000	0.156	-0.014	0.807	0.992	-0.001	0.017	0.001	0.000	0.000	0.000	0.000	0.000	0.000
160	98	2	0	0	0.000	1.420	-0.026	0.061	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
161	97	3	0	0	0.000	2.903	0.138	0.110	0.001	0.000	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
162	99	1	0	0	0.000	1.954	0.118	0.160	-0.001	-0.089	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
163	100	0	0	0	0.000	0.000	0.318	1.814	0.367	0.000	-0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
164	93	7	0	0	0.000	0.000	0.823	1.013	0.165	0.176	-0.072	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165	90	10	0	0	0.000	0.015	3.296	3.754	0.946	0.213	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
166	100	0	0	0	0.000	0.015	-0.015	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
167	92	8	0	0	0.000	0.142	2.105	-0.213	0.520	0.098	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
168	100	0	0	0	0.018	0.000	1.346	2.560	0.886	0.107	-0.234	0.018	0.010	0.000	0.000	0.000	0.000	0.000	0.000
169	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170	100	0	0	0	0.030	0.000	0.000	0.000	0.294	0.010	0.003	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000
171	100	0	0	0	-0.002	0.182	-0.001	0.003	0.000	0.000	0.000	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
172	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.080	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
173	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.356	0.007	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000
174	100	0	0	0	0.000	0.000	0.000	0.000	0.003	0.008	0.019	0.000	0.097	0.000	0.000	0.000	0.000	0.000	0.000
175	100	0	0	0	0.020	0.000	0.000	0.000	0.000	0.200	0.020	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000
176	0	100	0	0	0.275	0.000	0.000	0.000	0.039	0.038	0.000	0.275	0.133	0.123	0.139	0.158	0.000	0.000	0.000
177	0	100	0	0	0.000	0.000	0.000	0.000	0.015	0.002	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
178	0	100	0	0	0.000	0.000	0.000	0.000	0.010	0.071	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
179	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.493	0.104	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.010	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
181	0	100	0	0	1.184	0.000	0.000	0.000	0.005	0.021	1.960	1.184	0.041	1.000	1.400	2.000	0.000	0.000	0.000
182	0	100	0	0	1.140	0.000	0.000	0.000	0.005	0.020	1.527	1.140	0.034	1.000	1.400	2.000	0.000	0.000	0.000
183	0	100	0	0	0.029	0.000	0.000	0.000	0.080	-0.026	0.001	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000
184	0	100	0	0	0.000	0.000	0.000	0.000	0.017	0.042	0.003	0.000	1.540	0.200	0.000	0.000	0.000	0.000	0.000
185	0	100	0	0	0.000	0.000	0.000	0.000	0.006	0.046	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
186	96	4	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.067	0.000	0.000	0.000	15.000	20.000	0.000	0.000	0.000
187	94	6	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.031	0.000	0.650	1.000	1.000	0.600	0.000	0.000	0.000
188	94	6	0	0	1.983	0.000	0.000	0.000	0.000	0.000	0.000	1.983	2.291	1.000	1.000	1.000	0.000	0.000	0.000
189	10	90	0	0	0.000	0.000	0.000	0.000	0.000	0.019	0.037	0.000	0.000	0.000	0.000	0.000	0.330	0.000	0.000
190	100	0	0	0	0.011	0.000	0.000	0.000	0.000	0.216	0.108	0.011	0.001	0.000	0.000	0.000	0.000	0.000	0.000
191	0	100	0	0	0.063	0.000	0.000	0.000	0.000	0.011	0.050	0.063	0.000	1.050	0.769	0.100	0.000	0.000	0.000
192	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.430	2.180	2.950	2.750	0.987	0.000
193	0	100	0	0	0.037	0.000	0.000	0.000	0.000	0.000	0.046	0.037	0.001	0.000	0.417	0.300	0.000	0.000	0.000
194	0	100	0	0	0.081	0.000	0.000	0.000	0.000	0.000	0.040	0.081	0.821	0.091	0.000	0.000	0.000	0.000	0.000
195	0	100	0	0	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.033	0.034	0.127	0.000	0.000	0.000	0.000	0.000
196	100	0	0	0	1.629	0.000	0.000	0.000	0.000	0.000	1.422	1.629	0.357	0.000	0.000	0.000	0.000	0.000	0.000
197	90	10	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
198	0	100	0	0	0.160	0.000	0.000	0.000	0.000	0.000	0.000	0.160	0.000	0.000	0.000	0.000	0.000	0.000	0.000
199	100	0	0	0	0.015	0.000	0.000	0.000	0.000	0.000	0.148	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000
200	100	0	0	0	0.032	0.000	0.000	0.000	0.000	0.000	0.175	0.032	0.276	0.000	0.000	0.000	0.000	0.000	0.000
201	100	0	0	0	0.608	0.000	0.000	0.000	0.000	0.000	0.103	0.608	0.000	0.000	0.000	0.000	0.000	0.000	0.000
202	0	100	0	0	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.101	0.074	0.000	0.000	0.000	0.000	0.000	0.000
203	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
204	100	0	0	0	0.455	0.000	0.000	0.000	0.000	0.087	1.775	0.455	0.001	0.000	0.000	0.000	0.000	0.000	0.000
205	100	0	0	0	1.000	0.000	0.000	0.000	0.000	0.000	0.696	1.000	0.955	0.000	0.000	0.000	0.000	0.000	0.000
206	92	8	0	0	0.520	0.000	0.000	0.000	0.000	0.045	1.929	0.520	0.205	0.000	0.000	0.000	0.000	0.000	0.000
207	100	0	0	0	0.335	0.000	0.000	0.000	0.000	0.040	1.423	0.335	0.000	0.000	0.000	0.000	0.000	0.000	0.000
208	100	0	0	0	0.176	0.000	0.000	0.000	0.000	0.080	1.685	0.176	0.010	0.000	0.000	0.000	0.000	0.000	0.000
209	100	0	0	0	1.607	0.000	0.000	0.000	0.000	0.000	0.588	1.607	0.755	0.000	0.000	0.000	0.000	0.000	0.000
210	86	14	0	0	1.651	0.000	0.000	0.000	0.000	0.000	0.623	1.651	0.096	0.000	0.000	0.000	0.000	0.000	0.000
211	100	0	0	0	1.202	0.000	0.000	0.000	0.000	0.000	0.702	1.202	0.470	0.000	0.000	0.000	0.000	0.000	0.000
212	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.000	0.000	0.000	0.000	0.000	0.000
213	100	0	0	0	0.023	0.000	0.000	0.000	0.000	0.000	0.133	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000
214	100	0	0	0	0.064	0.000	0.000	0.000	0.000	0.000	0.259	0.064	0.075	0.000	0.000	0.000	0.000	0.000	0.000
215	0	100	0	0	0.024	0.000	0.000	0.000	0.000	0.000	0.028	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000
216	100	0	0	0	-0.001	0.000	0.000	0.000	0.000	0.000	0.065	-0.001	0.008	0.000	0.000	0.000	0.000	0.000	0.000
217	0	100	0	0	0.290	0.000	0.000	0.000	0.000	0.002	0.044	0.290	0.780	0.000	0.000	0.000	0.000	0.000	0.000
218	0	100	0	0	0.035	0.000	0.000	0.000	0.000	0.150	0.015	0.035	0.010	0.000	0.000	0.000	0.000	0.000	0.000
219	0	100	0	0	0.009	0.000	0.000	0.000	0.000	0.000	0.035	0.009	0.000	0.000	0.000	1.000	0.000	0.000	0.000

Current Actual or Projected Purpose Allocation (%) / Current Actual or Projected IRE (%) / Nominated outputs (PC Period)

Sort Ref	Purpose Allocation Quality	Purpose Allocation Base	Purpose Allocation ESL	Purpose Allocation Growth	Projected IRE Allocation Water	Projected IRE Allocation Sewerage	Nominated Output
1	66	67	68	69	70	71	72
1	100	0	0	0	0	0	01
2	100	0	0	0	0	0	03
3	0	53	0	47	0	0	
4	0	100	0	0	0	0	08
5	0	100	0	0	0	0	01
6	10	46	0	44	45	0	01
7	0	94	0	6	94	0	01
8	69	25	6	0	25	0	01
9	0	69	0	31	41	28	01
10	40	60	0	0	60	0	01
11	62	38	0	0	38	0	01
12	0	0	100	0	0	0	01
13	80	16	0	4	16	0	01
14	45	45	0	10	45	0	01
15	0	0	0	100	0	0	01
16	0	0	100	0	0	0	
17	0	0	0	100	0	0	02
18	4	66	0	30	66	0	01
19	0	100	0	0	0	0	01
20	100	0	0	0	0	0	01
21	0	94	0	6	94	0	01
22	0	0	0	100	0	0	02
23	100	0	0	0	0	0	01
24	100	0	0	0	0	0	01
25	0	100	0	0	100	0	01
26	0	100	0	0	100	0	01
27	37	62	1	0	62	0	01
28	40	60	0	0	60	0	01
29	40	60	0	0	60	0	01
30	0	100	0	0	0	0	01
31	0	0	0	100	0	0	03
32	0	0	0	100	0	0	
33	0	10	0	90	10	0	
34	0	0	0	100	0	0	01
35	100	0	0	0	0	0	
36	40	60	0	0	60	0	01
37	57	37	6	0	37	0	01
38	11	89	0	0	89	0	01
39	17	83	0	0	83	0	01
40	20	80	0	0	80	0	
41	27	69	0	4	69	0	01
42	0	4	1	95	0	0	02
43	0	33	0	67	27	0	11
44	100	0	0	0	0	0	01
45	0	0	0	100	0	0	01
46	0	100	0	0	100	0	01
47	0	100	0	0	0	0	01
48	0	100	0	0	75	25	01
49	26	44	3	27	38	0	
50	0	79	0	21	65	0	01
51	93	0	0	7	0	0	01
52	0	100	0	0	0	0	
53	0	100	0	0	0	0	01
54	0	100	0	0	0	0	02
55	100	0	0	0	0	0	01
56	0	0	0	100	0	0	08
57	0	100	0	0	100	0	
58	0	100	0	0	100	0	09
59	0	100	0	0	100	0	09
60	100	0	0	0	0	0	01
61	100	0	0	0	0	0	01
62	100	0	0	0	0	0	
63	0	100	0	0	0	0	
64	0	100	0	0	0	0	01
65	0	66	1	33	66	0	08
66	0	91	0	9	91	0	08
67	30	65	0	5	65	0	08
68	0	99	0	1	99	0	08
69	0	95	0	5	95	0	08
70	0	50	0	50	0	0	01
71	0	100	0	0	0	0	01
72	89	11	0	0	0	0	01
73	0	100	0	0	100	0	
74	0	100	0	0	0	0	01
75	100	0	0	0	0	0	01
76	0	100	0	0	0	0	01
77	0	0	100	0	0	0	01
78	0	0	100	0	0	0	01
79	0	100	0	0	0	0	01
80	59	25	11	5	25	0	01
81	52	48	0	0	48	0	
82	0	100	0	0	80	20	01
83	0	100	0	0	0	0	
84	0	100	0	0	0	0	01
85	0	100	0	0	0	0	01
86	0	100	0	0	0	0	01
87	0	100	0	0	0	0	01
88	0	100	0	0	0	0	01
89	0	100	0	0	0	0	01
90	0	100	0	0	0	0	01
91	0	100	0	0	0	0	01
92	0	100	0	0	0	0	01
93	0	100	0	0	0	0	01
94	0	100	0	0	0	0	01
95	0	100	0	0	0	0	01
96	0	100	0	0	0	0	01
97	0	100	0	0	0	0	01
98	0	100	0	0	0	0	01
99	0	100	0	0	0	0	01
100	0	100	0	0	0	0	01
101	0	100	0	0	0	0	01
102	0	100	0	0	0	0	01
103	0	100	0	0	0	0	01
104	0	100	0	0	0	0	01
105	0	100	0	0	0	0	01
106	0	100	0	0	0	0	01
107	0	100	0	0	0	0	01
108	0	100	0	0	0	0	01
109	0	100	0	0	0	0	01
110	0	100	0	0	0	0	01
111	0	100	0	0	0	0	01
112	0	100	0	0	0	0	01
113	0	100	0	0	0	0	01
114	0	100	0	0	0	0	01
115	0	100	0	0	0	0	01
116	0	100	0	0	0	0	01
117	0	100	0	0	0	0	01
118	0	100	0	0	0	0	01
119	0	100	0	0	0	0	01
120	0	100	0	0	0	0	01
121	0	100	0	0	0	0	01
122	0	100	0	0	0	0	01
123	0	100	0	0	0	0	01
124	0	100	0	0	0	0	01
125	0	100	0	0	0	0	01
126	0	100	0	0	0	0	01
127	0	100	0	0	0	0	01
128	0	100	0	0	0	0	01
129	0	100	0	0	0	0	01
130	0	100	0	0	0	0	01
131	26	44	3	27	38	0	01
132	100	0	0	0	0	0	02
133	30	51	3	16	47	0	
134	41	21	3	35	20	0	01
135	0	100	0	0	90	10	01
136	9	64	7	20	64	0	
137	18	19	60	3	17	0	01
138	12	64	4	20	58	0	01
139	12	66	16	6	66	0	01
140	3	62	21	14	58	0	01
141	0	69	25	6	66	0	01
142	67	27	6	0	27	0	01
143	27	32	32	9	32	0	01
144	17	6	77	0	6	0	01
145	52	31	8	9	31	0	01
146	32	22	37	9	22	0	01
147	75	25	0	0	25	0	01
148	1	99	0	0	99	0	01
149	25	75	0	0	75	0	01
150	25	64	7	4	64	0	
151	0	100	0	0	100	0	01
152	95	0	1	4	0	0	01
153	38	35	6	21	35	0	01
154	92	5	1	2	5	0	01
155	44	55	0	1	54	0	
156	9	76	6	9	67	0	01
157	72	22	1	5	22	0	01
158	47	51	0	2	51	0	01
159	52	44	0	4	44	0	01
160	16	55	4	25	55	0	01
161	36	58	2	4	57	0	01
162	35	34	28	3	34	0	01
163	8	86	0	6	86	0	01
164	0	61	0	39	61	0	01
165	23	47	9	21	43	0	01
166	0	100	0	0	0	0	01
167	5	71	14	10	71	0	01
168	32	49	0	19	49	0	01
169	15	62	0	23	62	0	
170	0	0	0	100	0	0	01
171	8	17	1	74	17	0	01
172	100	0	0	0	0	0	
173	88	0	0	12	0	0	01
174	0	0	0	100	0	0	01
175	7	93	0	0	93	0	01
176	0	100	0	0	0	0	01
177	0	100	0	0	0	0	01
178	0	100	0	0	0	0	01
179	100	0	0	0	0	0	01
180	0	100	0	0	100	0	01
181	0	100	0	0	0	0	01
182	0	100	0	0	0	0	01
183	0	100	0	0	0	0	01
184	0	100	0	0	0	0	01
185	0	0	100	0	0	0	01
186	50	34	2	14	32	0	01
187	30	51	3	16	47	0	01
188	30	51	3	16	47	0	01
189	0	100	0	0	10	0	01
190	44	56	0	0	56	0	01
191	100	0	0	0	0	0	01
192	0	100	0	0	0	0	01
193	27	10	27	36	0	0	01
194	32	68	0	0	0	0	01
195	100	0	0	0	0	0	01
196	100	0	0	0	0	0	01
197	0	63	2	35	53	0	01
198	0	100	0	0	0	0	01
199	0	100	0	0	100	0	01
200	0	100	0	0	100	0	01
201	0	100	0	0	100	0	01
202	70	30	0	0	0	0	01
203	0	100	0	0	100	0	01
204	54	46	0	0	46	0	01
205	97	3	0	0	3	0	01
206	78	4	5	13	3	0	01
207	96	4	0	0	4	0	01
208	86	14	0	0	14	0	01
209	66	34	0	0	34	0	01
210	73	22	5	0	13	0	01
211	90	10	0	0	10	0	01
212	50	34	2	14	34	0	01
213	0	100	0	0	100	0	01
214	0	95	5	0	95	0	01
215	0	100	0	0	0	0	01
216	30	60	7	3	60	0	01
217	0	100	0	0	0	0	01
218	0	100	0	0	0	0	01
219	0	0	100	0	0	0	01

Sort Ref (1)	CIM Submission Reference (2)	Project ID Reference (3)	Project Name (4)	PC Project Period (5)	Parent Project ID (6)	Substitute Project ID (7)	Primary Asset Category (8)	PC10 Programme (9)	Regulatory Sign-Off Required (10)	Baseline A1 Date (11)	Baseline Project Approval Date (12)	Baseline Start on Site Date (13)	Baseline Beneficial Use Date (14)	Baseline Regulatory sign off Date (15)	Baseline Completion of Construction Date (16)	Baseline End of Maintenance Period Date (17)	Baseline Service Allocation Water Infrastructure (18)	Baseline Service Allocation Water Non-Infrastructure (19)	Baseline Service Allocation Sewerage Infrastructure (20)	Baseline Service Allocation Sewerage Non-Infrastructure (21)
			Project Identification							Baseline Milestone Dates							Baseline Service Cost Allocation			
220	2016_17 Q4	JI108	PC15 Year 1- Asset Peformance Miscellaneous Solutions Deve	06			06	20												
221	2016_17 Q4	JI110	Impounding Reservoir Audits.	06			01	03												
222	2016_17 Q4	JI111	PC15 Base Maintenance (Water) Parent	06			01	01									0	100	0	0
223	2016_17 Q4	JI112	PC15 Watermains Rehabiliation Parent	06			03	08									96	4	0	0
224	2016_17 Q4	JI113	PC15 Additional enhancement output Parent				0	98									32.4890689	18.8972862	20.7293722	27.8842727
225	2016_17 Q4	JI114	PC15 FTS (Water) Parent EP	06			03	23									100	0	0	0
226	2016_17 Q4	JI115	PC15 Appraisal of NIW infrastructure at Railways, DRD Road &	06			03	23									100	0	0	0
227	2016_17 Q4	JI117	WTW Resilience Improvement	00			02	04												
228	2016_17 Q4	JI118	Service Reservoir Condition Assessment(PC15 Year 2)	00			04	07												
229	2016_17 Q4	JI119	Capital Maintenance Planning: Trunk Main Condition Grading (F	00			03	05												
230	2016_17 Q4	JI120	WIIM Networks Work Packages & Verification(PC15 Year 2)	00			06	20												
231	2016_17 Q4	JI121	Hydraulic Model Rebuilds & Project Management(PC15 Year 2)	00			06	20												
232	2016_17 Q4	JI122	PPRA's for Rehab Work Packages 2016/17	06			03	20												
233	2016_17 Q4	JI123	NIW Historic Estate Condition Assessments	06			06	03												
234	2016_17 Q4	JI126	PC15 Year 3 WPS Base Maintenance	06			05	01												
235	2016_17 Q4	JI127	WIIM Networks Workpackages and Verification 2017-2018	06			06	20												
236	2016_17 Q4	JI128	Clean Water Network Hydraulic Model Rebuilds and Ad -Hoc /	06			06	20												
237	2016_17 Q4	JI129	Miscellaneous Risk and Consequence Update and Clean Water	06			06	20												
238	2016_17 Q4	JI130	Service Reservoir Condition Assessments 2017-2018 and beyo	06			04	20												
239	2016_17 Q4	JI131	PPRA's for Rehab Work Packages	06			03	20												
240	2016_17 Q4	JI132	Trunk / Strategic Main Investigation 2017-2018	06			03	20												
241	2016_17 Q4	JI133	DG3 Management Improvements	06			06	08												
242	2016_17 Q4	JI134	Update to Standardised Engineering Drawings	06			06	20												
243	2016_17 Q4	JL713	Killyhevlin to Lough Bradan Link Watermain	02			03	05									0	0	0	0
244	2016_17 Q4	JL715	Caugh Hill, Carmoney to Strabane Strategic Link Watermain	02			03	05					31/01/2019				89	11	0	0
245	2016_17 Q4	JL750	Ballinrees to Limavady/Londonderry Supply Augmentation	01			03	05		08/12/2009	05/01/2010	22/02/2010	30/09/2011		30/09/2011	29/09/2012	0	0	0	0
246	2016_17 Q4	JL768	Caugh Hill WTW FAS Storage	00			02	04												
247	2016_17 Q4	JL769	Glenedra Water Intake Refurbishment & Access Road Repair	00			01	03												
248	2016_17 Q4	JL770	Caugh Hill WTW - Upgrade of Wash Water Treatment Facilities	02			02	04									0	100	0	0
249	2016_17 Q4	JL772	WTW - Treatability Appraisal of Caugh Hill WTW	00			02	04					31/01/2019				0	100	0	0
250	2016_17 Q4	JL773	Carmoney WTW DAF process Optimisation	00			02	04									0	100	0	0
251	2016_17 Q4	JL774	Faughan PS - Bandscreen upgrade	00			05	01												
252	2016_17 Q4	JL781	A29 Killytoney Realignment, Watermain Diversions	00			03	23												
253	2016_17 Q4	JL785	A6 Dungiven Drumahoe	06			03	23												
254	2016_17 Q4	JN390	Lough Bradan WTWs Upgrade	01			02	04		31/03/2009	27/04/2009	31/08/2009	03/03/2011		03/03/2011	02/03/2012	0	0	0	0
255	2016_17 Q4	JN483	Glenhordial WTW expansion of existing sludge plant	06			02	04									0	100	0	0
256	2016_17 Q4	JN508	Lough Bradan WTW Upgrade Part 2	02			02	04												
257	2016_17 Q4	JN509	Derg WTW - Upgrade of Filters and Chemical Dosing	06			02	04									0	100	0	0
258	2016_17 Q4	JN510	Strule River Omagh Trunk Water Main Repair	00			03	23												
259	2016_17 Q4	JN511	South / South East Zonal Study South East Phase 1 Work Pack	03			03	08												
260	2016_17 Q4	JN512	Omagh Phase 2 Watermain Rehab	03			03	08												
261	2016_17 Q4	JN514	Castletown/Koram WPS Upgrade	06			03	23												
262	2016_17 Q4	JN528	Crawfords Hill Mains Replacement	00			03	08												
263	2016_17 Q4	JN529	Colebrook Park Road Mains Replacement	00			03	08												
264	2016_17 Q4	JN530	Toura Road Mains Replacement	00			03	08												
265	2016_17 Q4	JN532	Belleek Meenacloybane Strategic Main Replacement.	06			03	23												
266	2016_17 Q4	JN534	WIIM Phase 2 Loughmacrory WP	06			03	08												
267	2016_17 Q4	JN535	WIIM Phase 2 Lough Braden Drumquin WP	06			03	08												
268	2016_17 Q4	JN538	Derg WTW MCPA PEO Undertakings	06			02	04												
269	2016_17 Q4	JN541	PC15 Year 3 WTW Capital Maintenance - West Region	06			02	01												
270	2016_17 Q4	JN544	Doochrock to Drumkeeran Watermain Upgrades	06			02	23												
271	2016_17 Q4	JN545	Alleyhill to Doochrock Watermain	06			03	23												
272	2016_17 Q4	JN546	Tyrone South WIIM 2.1 Work Package	06			03	08												
273	2016_17 Q4	JN547	Tyrone North WIIM 2.1 Work Package	06			03	08												
274	2016_17 Q4	JN548	Fermanagh South WIIM 2.1 Work Package	06			03	08												
275	2016_17 Q4	JN549	Tyrone West WIIM 2.1 Work Package	06			03	08												
276	2016_17 Q4	JP631	Killyhevlin Clear Water Tank	02			04	06					30/09/2017				0	100	0	0
277	2016_17 Q4	JP650	Killyhevlin WTW Improvements to sludge settlement system	04			02	04												
278	2016_17 Q4	JP653	Enniskillen New Hospital Watermain Ext	00			03	23												
279	2016_17 Q4	JP669	Killyhevlin WTW - GAC	00			02	04				01/06/2013	30/09/2014		01/02/2015	01/02/2016	0	100	0	0
280	2016_17 Q4	JP680	South / South East Zonal Study South Phase 1 Work Packages	03			03	08												
281	2016_17 Q4	JP683	Hallcraig road, Enniskillen WM Ext	00			03	23												
282	2016_17 Q4	JP685	Killyhevlin WTW Hypo Storage Tank Replacement	03			02	01												
283	2016_17 Q4	JP688	PC15 Year 2 WTW Base Maintenance – West Region	00			02	01												
284	2016_17 Q4	JP690	Syonfin WPS to Dungoran SR 150mm DI Watermain Replacem	06			03	23												
285	2016_17 Q4	JP691	Fermanagh North WIIM 2.1 Work Package	06			03	08												
286	2016_17 Q4	JR342	Strategic Link - Castor Bay to Belfast	01			03	05				01/06/2013	30/12/2014		28/02/2015	28/02/2016	85	15	0	0
287	2016_17 Q4	JR348	Dunore to Hydepark Pumping Main Replacement	01			03	05				17/10/2005	13/01/2012		13/01/2012	12/01/2013	0	0	0	0
288	2016_17 Q4	JR449	Oldpark Watermain Improvements	00			03	08									0	0	0	0
289	2016_17 Q4	JR461	Ballystockard Quarry main repair	00			03	05		31/01/2012	07/02/2012	25/07/2011	08/02/2012		08/02/2012	29/02/2012	0	0	0	0
290	2016_17 Q4	JR463	Dorisland WTW - GAC Feasibility Study	01			02	04					31/03/2015				0	100	0	0
291	2016_17 Q4	JR464	Carrickfergus Phase 3 Watermains Improvements	00			03	08												
292	2016_17 Q4	JR465	Frenchpark Raw Water Conduit Appraisal Study	00			01	03									100	0	0	0
293	2016_17 Q4	JR469	Whiteabbey Upper Service Reservoir Outlet Pipe Replacement	00			04	07												
294	2016_17 Q4	JR480	Warwicks Row Carrickfergus Watermain Extension	00			03	23												
295	2016_17 Q4	JR485	Former Visteon Factory - watermain extension	00			03	23												
296	2016_17 Q4	JR488	Dunanney SR Building Improvements	00			04	07												
297	2016_17 Q4	JR490	Westland House, Main Building Reception Upgrade	06			15	20												
298	2016_17 Q4	JR494	WIIM Phase 2 Belfast Ballygomartin North WP	06			03	08												
299	2016_17 Q4	JR499	Dorisland Aquaduct Survey	06			04	20												
300	2016_17 Q4	JS220	Bangor Outer Zone Watermain Improvements	00			03	08				14/01/2008	22/09/2008		22/09/2008	22/09/2009	0	0	0	0
301	2016_17 Q4	JS274	Drumaroad WTW Clear Water Tank	01			02	06					31/03/2021				0	100	0	0
302	2016_17 Q4	JS306	Mourne Wall Towers	03			01	03												
303	2016_17 Q4	JS309	Ardview Road Killinchy Watermain Replacement	00			03	23												
304	2016_17 Q4	JS310	Manse Road Ballygowan water main replacement	03			03	23												
305	2016_17 Q4	JS311	Sampsons Stone, SR, Scour Pipe Diversion.	06			04	07												
306	2016_17 Q4	JS312	PC15 Year 2 WTW Base Maintenance – East Region	00			02	01												
307	2016_17 Q4	JT255	Lisburn Public Realm	00			03	23									0	0	0	0
308	2016_17 Q4	JT256	Lisburn South Rural Phase 1 & Dunmurry watermain improvem	00			03	08												
309	2016_17 Q4	JT260	Boomers Dam-Flood Attenuation	06			01	03												
310	2016_17 Q4	JT261	PC15 Year 3 WTW Capital Maintenance - East Region	06			02	01												
311	2016_17 Q4	JT262	Lurgan Moira WIIM 2.1 Work Package	06			03	08												
312	2016_17 Q4	JV830	Crieve Service Reservoir	01			04	06		16/01/2012	13/02/2012	30/06/2013	01/01/2015		30/03/2015	30/03/2016	0	100	0	0
313	2016_17 Q4	JV853	Camlough Impounding Reservoir Dam Survey. (Condition Asses	00			01	03									100	0	0	0
314	2016_17 Q4	JV854	Silent Valley recreational facilities appraisal	06			01	03												
315	2016_17 Q4	JV856	Newry Public Realm Phase 2	00			03	23												
316	2016_17 Q4	JV859	Watermain Improvements, Newry, Phase 3	03			03	08												
317	2016_17 Q4	JV870	Silent Valley Project PH3	00			01	03												
318	2016_17 Q4	JV871	Newry Depot premises upgrade	06			15	20												
319	2016_17 Q4	JV881	WIIM 1 Phase 2 Carran Hill Crossmaglen WP	06			03	08												
320	2016_17 Q4	JV886	Banbridge South Armagh WIIM 2.1 Work Package	06			03	08												
321	2016_17 Q4	JV887	Newry West WPS, fire damage	06			06	01												
322	2016_17 Q4	JZ005	Water Resource and Supply Resilience Plan	06			01	03					31/03/2017				50	50	0	0
323	2016_17 Q4	JZ006	Hydraulic Model Rebuilds and Project Managment 2015-2016	06			06	20												
324	2016_17 Q4	JZ007	Asset Performance CCTV Surveys 2015/16	06			07	12												
325	2016_17 Q4	KA158	Milltown, Antrim WwTW	01			09	15				30/07/2007	12/02/2010		12/02/2010	02/12/2011	0	0	0	0
326	2016_17 Q4	KA191	Black Cave & Upper Roddens Sewage Imps, Larne	01			13	12				10/02/2011	15/03/2012		15/03/2012	15/03/2013	0	0	0	0
327	2016_17 Q4	KA201	Ballyeaston Sewage System Upgrade	01			12	12		22/10/2010	19/11/2010	07/02/2011	02/10/2012		02/10/2012	02/10/2013	0	0	0	0
328	2016_17 Q4	KA239	Mullans WWTW (Antrim) Feasibility Study	04			14	16					31/03/2021				0	0	0	100
329	2016_17 Q4	KA251	Umry Lodge CSO, Antrim	00			07	12									0	0	0	0
330	2016_17 Q4	KA252	Glynn WWPS, Relocation of Overflow Pipe	00			12	02									0	0	0	0
331	2016_17 Q4	KA255	Antrim Road, Templepatrick, Storm Sewer Extension	00			07	24												
332	2016_17 Q4	KA256	Larne WWTW's Feasibility Study	04			09	16									0	0	0	100
333	2016_17 Q4	KA257	Victoria Road, Ballyclare, Foul Sewer Extension	00			07	24												
334	2016_17 Q4	KA258	Antrim LDC Additional Fire Escape	03			15	20												
335	2016_17 Q4	KA259	Doagh WWPS Replacement	03			12	02												
336	2016_17 Q4	KA260	Muckamore WWPS Upgrade	06			12	12												
337	2016_17 Q4	KA261	Milltown Road WWPS Upgrade	06			12	12												
338	2016_17 Q4	KA262	Islandreagh WWPS Upgrade	06			12	12												
339	2016_17 Q4	KA263	Dunadry WWPS Upgrade	06			12	12												
340	2016_17 Q4	KA264	Ballyclare WWTW - Membrane Base Maintenance	03			09	02												
341	2016_17 Q4	KA270	Neillsbrook WwPS Upgrade Appraisal	06			12	12												
342	2016_17 Q4	KA271	Lylehill Road, Templepatrick, Foul Sewer Extension.	00			07	24												
343	2016_17 Q4	KA274	Clare Park, Clare Road, Ballycastle Foul Sewer Ext	00			07	24												
344	2016_17 Q4	KA275	Abbots Road Whiteabbey	06			07	24												
345	2016_17 Q4	KA276	Gortgole Road, Portglenone	06			07	24												
346	2016_17 Q4	KA278	The Square, Ballyclare	06			07	24												
347	2016_17 Q4	KA279	Townparks south Wwps Antrim	06			12	12												
348	2016_17 Q4	KA281	2 Gloverstown Road Toomebridge, Storm sewer .	06			07	24												
349	2016_17 Q4	KB287	Swatragh Wastewater Treatment Works	03			09	16				27/02/2012	29/03/2013		29/03/2013	29/03/2014	0	0	0	100
350	2016_17 Q4	KB314	Gulladuff WwTW	01			09	16				01/01/2013	01/11/2014		19/04/2014	19/04/2014	0	0	19	81
351	2016_17 Q4	KB316	Desertmartin WwTW	00			09	16									0	0	0	0
352	2016_17 Q4	KB400	Mullanahoe Road Ardboe Foul Sewer	00			07	24		19/06/2008	09/07/2008	06/10/2008	29/12/2008		29/12/2008	29/12/2009	0	0	0	0
353	2016_17 Q4	KB413	Dunnamore Road, Dunnamore Storm Sewer Ext	00			07	24												
354	2016_17 Q4	KB436	Whitehead, Ballystruder & Ballycarry Rationalisation	01			08	15				07/04/2008	15/12/2011		15/12/2011	14/12/2012	0	0	0	0
355	2016_17 Q4	KB459	Maghera WWTW Upgrade Phase 2	01			09	16				14/01/2013	28/01/2015		28/06/2013	28/06/2014	0	0	0	100
356	2016_17 Q4	KB474	Ballyronan WWTW Feasibility Study	06			14	16									0	0	0	0
357	2016_17 Q4	KB475	Derrycrin WWTW Feasibility Study	06			14	16									0	0	0	0
358	2016_17 Q4	KB476	Killygonlan (Mullanahoe)WwTW Upgrade	06			14	16									0	0	0	0
359	2016_17 Q4	KB481	Chambre Park WwPS	00			12	02									0	0	0	0
360	2016_17 Q4	KB482	Chapel Hill WwPS Upgrade	00			12	02									0	0	0	0
361	2016_17 Q4	KB488	System Upgrade For proposed Development At Desertcreat, Cc	00			07	24												
362	2016_17 Q4	KB490	Maloon WWPS, Cookstown, Access Improvements	00			12	02									0	0	0	0
363	2016_17 Q4	KB491	Portglenone WWPS Access Road Culverting and Upgrading of :	00			05	02												
364	2016_17 Q4	KB492	Gortalowry Park Cookstown Sewer Network Misconnections	01			07	12									0	0	0	0
365	2016_17 Q4	KB494	Moneymore WWTW Phase 2 Base Maintenance	00			09	02									0	0	0	0
366	2016_17 Q4	KB496	Garvagh WWTW's Phase 2 Base Maintenance	00			09	02									0	0	0	0
367	2016_17 Q4	KB498	Grange (Taylorstown) WWTWs Phase 2 Base Maintenance	00			09	16												
368	2016_17 Q4	KB499	Gortatray WWTWs Phase 2 Base Maintenance	00			09	02									0	0	0	0
369	2016_17 Q4	KB503	Desertcreat College, Cookstown, Foul Pumping Main Extension	00			07	24												
370	2016_17 Q4	KB505	Toome Road Ballymena Out of Sewer Flooding	00			07	12												
371	2016_17 Q4	KB507	Ballymena WWTW ABS High Speed Blowers Upgrade	00			09	02												
372	2016_17 Q4	KB508	Stewartstown WWTWs Appraisal	04			09	16												
373	2016_17 Q4	KB511	Ahoghill WWPS Replacement	03			12	12												
374	2016_17 Q4	KB515	Ballymoney Road(No.285) DG5 Solutions Study	06			07	12												
375	2016_17 Q4	KB519	Moneyneany WWTW Base Maintenance Phase 3	05			09	02												
376	2016_17 Q4	KB522	Ballymena Flooding Study - Toome Rd	00			07	12												
377	2016_17 Q4	KB524	20&22 Old Antrim Road, Ballymena Flood Alleviation	06			07	12												
378	2016_17 Q4	KB526	Magherafelt Town Centre Stormwater Management Project	06			07	12												
379	2016_17 Q4	KB532	59 Market Road, Ballymena, Storm Sewer	00			07	24												
380	2016_17 Q4	KB534	Raceview Road, Broughshane Storm Sewer	00			07	24												
381	2016_17 Q4	KB535	PC15 Year 3 WwTW Capital Maintenance – North Region	06			09	02												
382	2016_17 Q4	KC296	Ballycastle WwTW	06			09	16					01/01/2017				0	0	10	90
383	2016_17 Q4	KC302	Ballintoy WwTW	01			09	16					31/01/2017				0	0	0	100
384	2016_17 Q4	KC415	Ballysally CSO Coleraine - Works Package	00			07	12									0	0	100	0
385	2016_17 Q4	KC427	Ballyvoy WWTW Feasibility Study	06			14	16									0	0	0	0
386	2016_17 Q4	KC431	Milltown Road, Ballymoney, Foul Sewer Extension	00			07	24									0	0	0	0
387	2016_17 Q4	KC448	North Coast WWTW Phase 2 Base Maintenance	00			09	02									0	0	0	0
388	2016_17 Q4	KC450	Macosquin WwTW PC15	00			09	16									0	0	0	0
389	2016_17 Q4	KC456	Station Cottages Dervock Storm Sewer	00			07	24												
390	2016_17 Q4	KC459	Kilrea WWTWs Appraisal	04			09	16												
391	2016_17 Q4	KC460	Hopefield Road, Portrush, Storm Sewer Extension	00			07	24												
392	2016_17 Q4	KC463	Ballybogy WwTWs Appraisal for Upgrade or replacement	04			09	16					31/01/2021				0	0	0	100
393	2016_17 Q4	KC467	Ballycairn CSO , Coleraine, Upgrade.	03			07	12												
394	2016_17 Q4	KC470	65-67 Coleraine Rd Portstewart Storm Sewer	00			07	24												
395	2016_17 Q4	KC472	PC15 Yr 2 WwTW Base Maintenance North region	06			09	02												
396	2016_17 Q4	KC473	56 Knock Road, Ballymoney Storm Sewer Ext.	00			07	24												
397	2016_17 Q4	KC474	Dunluce Road, Flood Alleviation	06			07	12												
398	2016_17 Q4	KC475	55 Mountsandel Road Coleraine Storm Sewer	00			07	24												
399	2016_17 Q4	KC476	Rathmoyle House, Mary Street, Ballycastle Storm Sewer	00			07	24												
400	2016_17 Q4	KC477	Ballycairn WwPs Screw pump No2	06			12	02												
401	2016_17 Q4	KC479	Main Street, Ballykelly - Replacement Storm Sewer	06			07	24												
402	2016_17 Q4	KF012	Moygashel WwTW	01			07	15				12/01/2009	02/04/2010		02/04/2010	02/04/2011	0	0	0	0
403	2016_17 Q4	KF014	Clare Village Sewerage Scheme	00			07	12			07/08/2006	23/07/2007	26/04/2010		26/04/2010	26/04/2011	0	0	0	0
404	2016_17 Q4	KF028	Keady WwTW	01			09	16				13/09/2010	12/03/2012		12/03/2012	12/03/2013	0	0	0	0
405	2016_17 Q4	KF052	Greenfields-Ballinahonemore,	01			07	24												
406	2016_17 Q4	KF070	Eglish (Dungannon) WwTW upgrade	06			09	16									0	0	0	100
407	2016_17 Q4	KF334	Churchview, Armagh Rd, Moy WWPS Upgrade	00			12	02									0	0	0	0
408	2016_17 Q4	KF346	Robinsonstown WWTW Feasibility Study.	06			14	16				14/01/2014	01/01/2020		31/03/2015	31/03/2016	0	0	0	100
409	2016_17 Q4	KF349	Poyntzpass WWTW Feasibility Study	06			14	16									0	0	0	0
410	2016_17 Q4	KF350	Dungannon WWTW Feasibility Study.	00			14	16					01/01/2021				0	0	0	100
411	2016_17 Q4	KF351	Carrickaness Road, Benburb Storm Sewer Extension	00			07	24									0	0	0	0
412	2016_17 Q4	KF366	Hamiltonsbawn WWTW (Pump Installation)	00			09	02		23/05/2012	29/05/2012	20/08/2012	20/02/2013		20/02/2013	20/02/2014	0	0	0	0
413	2016_17 Q4	KF370	Moy WWTWs Phase 2 Base Maintenance	00			09	02									0	0	0	0
414	2016_17 Q4	KF373	Dungannon WWTW Health & Safety Issues	00			09	02												
415	2016_17 Q4	KF375	Mountnorris WWTW Feasibility Study	04			09	16												
416	2016_17 Q4	KF376	Moy WWTW Appraisal Study	04			09	16												
417	2016_17 Q4	KF377	Knockmoy Park Area Coalisland WwPS Replacement	00			12	12									0	0	0	100
418	2016_17 Q4	KF378	Clonmore Road, Clonmore Sewerage Scheme	00			07	12												
419	2016_17 Q4	KF379	Darkley WWTW Feasibility Study	04			09	16												
420	2016_17 Q4	KF380	Cabragh WWTW Feasibility Study	04			09	16												
421	2016_17 Q4	KF381	Aughnacloy WWTW Feasibility Study	04			09	16												
422	2016_17 Q4	KF383	Killyman Street Moy Storm Sewer Extension	00			07	24												
423	2016_17 Q4	KF387	Drelincourt , Armagh, Sewer Network Upgrade.	03			07	12												
424	2016_17 Q4	KF388	Killymaddy Hill, Dungannon Storm sewer	00			07	24												
425	2016_17 Q4	KF391	Drumman More / Mellifont WWPS Upgrade	06			12	12												
426	2016_17 Q4	KF396	Milford WWPS, Armagh, Upgrade.	06			12	12												
427	2016_17 Q4	KF397	Killylea Road WWPS, Armagh, Upgrade.	06			12	12												
428	2016_17 Q4	KF398	PC15 Year 2 WWTW Base Maintenance – South Region	06			09	02												
429	2016_17 Q4	KF400	Fellows Hall Rd, Killylea Foul Sewer	00			07	24												
430	2016_17 Q4	KF402	Rear of 11-13 Lurgan Rd, Banbrdige Foul Sewer	00			07	24												
431	2016_17 Q4	KF403	Keenaghan wwps upgrade	06			07	02												
432	2016_17 Q4	KF404	Moy Road, Dungannon (former Oaklin Hotel Site)	00			07	24												
433	2016_17 Q4	KG041	Maghaberry WwTW	06			09	16									0	0	0	0
434	2016_17 Q4	KG121	Upper Edward Street Newry	00			07	12		02/02/2009	09/02/2009	04/05/2009	25/02/2010		25/02/2010	25/02/2011	0	0	0	0
435	2016_17 Q4	KG183	Portadown Drainage Area Network Improvements - Meadow La	00			07	12				30/09/2014	01/01/2015		01/03/2015	01/03/2016	0	0	93	7
436	2016_17 Q4	KG184	Portadown Drainage Area Network Improvements - Obins Stree	00			07	12		15/12/2010	12/01/2011	01/04/2011	11/09/2012		11/09/2012	11/09/2013	0	0	0	0
437	2016_17 Q4	KG190	DG5 Dunbarton Street Gilford Additional Studies	00			07	12									0	0	0	0
438	2016_17 Q4	KG191	Dobbin WWPS - Feasibility Study	01			12	02									0	0	0	0
439	2016_17 Q4	KG192	Donaghcloney WWPS - Feasibility Study	00			12	12									0	0	0	0
440	2016_17 Q4	KG194	Garland Avenue, Lurgan Sewer Extension	00			07	24									0	0	0	0
441	2016_17 Q4	KG197	Waringstown WWTWs Phase 2 Base Maintenance	00			09	02									0	0	0	0
442	2016_17 Q4	KG198	Hunters Mill, Annesborough Road, Lurgan, Storm Sewer Extens	00			07	24												
443	2016_17 Q4	KG200	Waringstown WWTW's Feasibility Study	04			09	16												
444	2016_17 Q4	KG202	Aghagallon WWTW - MBBR Trial	03			09	16									0	0	0	100

Sort Ref (1)	Baseline CAPEX 2010-11 £m (22)	Baseline CAPEX 2011-12 £m (23)	Baseline CAPEX 2012-13 £m (24)	Baseline CAPEX 2013-14 £m (25)	Baseline CAPEX 2014-15 £m (26)	Baseline CAPEX 2015-16 £m (27)	Baseline CAPEX 2016-17 £m (28)	Baseline CAPEX 2017-18 £m (29)	Baseline CAPEX 2018-19 £m (30)	Baseline CAPEX 2019-20 £m (31)	Baseline CAPEX 2020-21 £m (32)	Baseline CAPEX 2021-22 £m (33)	Baseline CAPEX 2022-23 £m (34)	Baseline CAPEX 2023-24 £m (35)	Baseline Purpose Allocation Quality (36)	Baseline Purpose Allocation Base (37)	Baseline Purpose Allocation ESL (38)	Baseline Purpose Allocation Growth (39)	Current Actual or Projected A1 Date (40)	Current Actual or Projected Project Approval Date (41)	Current Actual or Projected Start on Site Date (42)	Current Actual or Projected Beneficial Use Date (43)	Current Actual or Projected Regulatory sign off Date (44)	Current Actual or Projected Completion of Construction Date (45)	Current Actual or Projected End of Maintenance Period Date (46)
	Baseline Expenditure Profile (£m 2012-13 prices)														Baseline Purpose Allocation				Current Actual or Projected Milestone Dates						
220																			10/08/2015	14/09/2015					
221																									
222	0.000	0.000	0.000	0.000	0.000	3.558	3.441	3.421	3.400	3.380	3.359	0.000	0.000	0.000	0	100	0	0							
223	0.000	0.000	0.000	0.000	0.000	17.937	17.829	17.722	17.616	17.510	17.405	0.000	0.000	0.000	49	35	2	14							
224	0.000	0.000	0.000	0.000	0.000	4.811	10.776	11.737	12.749	15.318	17.406	0.000	0.000	0.000	48	0	16	36							
225	0.000	0.000	0.000	0.000	0.000	0.647	0.413	0.320	0.272	0.271	0.269	0.000	0.000	0.000	0	0	0	100							
226	0.000	0.000	0.000	0.000	0.000	0.589	0.293	0.291	0.289	0.288	0.000	0.000	0.000	0.000	0	100	0	0							
227																			08/09/2016	08/09/2016					
228																			09/06/2016	10/06/2016					
229																			09/06/2016	21/07/2016	03/10/2016				
230																			09/06/2016	21/07/2016					
231																			04/05/2016	10/06/2016					
232																			08/06/2016	21/07/2016					
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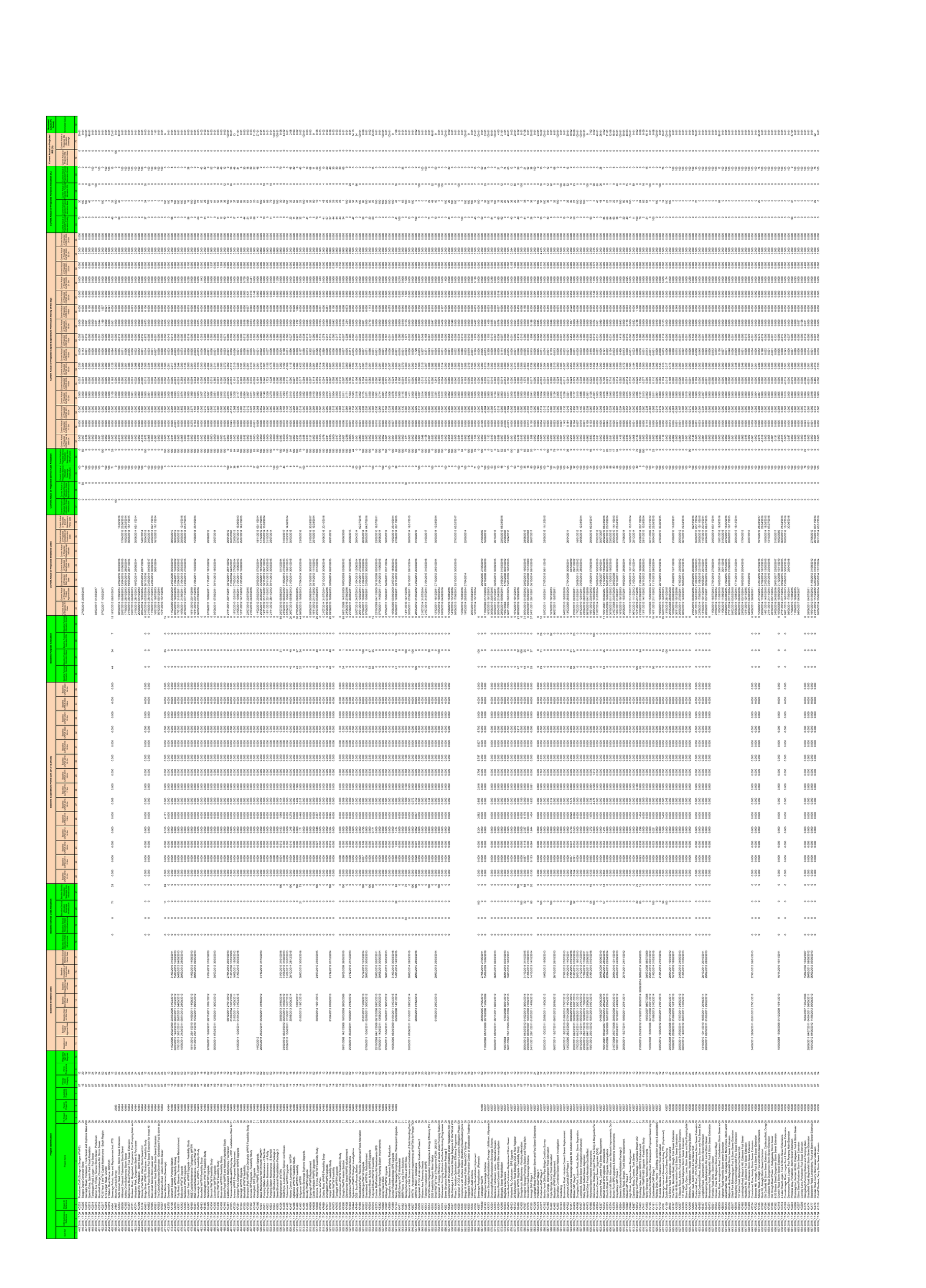
241																									
242																									
243	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0							
244	0.000	0.000	0.000	0.000	0.000	0.000	1.089	4.363	3.720	0.000	0.000	0.000	0.000	0.000	0	0	0	100							
245	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	08/12/2009	05/01/2010					
246																			29/10/2013	31/10/2013	28/11/2014	01/02/2016		26/12/2014	04/04/2016
247																			11/04/2014	28/04/2014	28/11/2014	31/03/2016		25/05/2015	16/01/2017
248	0.000	0.000	0.000	0.000	0.000	0.000	1.252	2.887	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	12/02/2016	19/02/2016	03/04/2017				
249	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.607	3.656	0.000	0.000	0.000	0.000	0.000	88	12	0	0							
250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.051	2.957	0.000	0.000	0.000	0	100	0	0							
251																			14/04/2014	28/04/2014	03/11/2014	06/01/2016		29/01/2016	
252																			05/12/2014	11/12/2014					
253																									
254	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	31/03/2009	27/04/2009	01/04/2014	02/03/2011		30/07/2012	
255	0.000	0.000	0.000	0.000	0.000	0.338	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0							
256																									
257	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.145	0.000	0.000	0.000	0	100	0	0	02/11/2016	04/11/2016					
258																									
259																			14/02/2014	21/02/2014	03/03/2014	20/02/2015		23/03/2015	
260																			04/03/2014	10/03/2014	02/09/2013	30/10/2015		30/03/2015	
261																			10/08/2016	12/08/2016	05/12/2016				
262																									
263																			16/03/2016	18/03/2016	15/02/2016	29/07/2016			
264																			16/03/2016	18/03/2016		03/04/2017			
265																			28/10/2016	01/11/2016	07/11/2016				
266																			17/10/2016	17/10/2016	01/08/2016				
267																			04/07/2016	04/07/2016	21/07/2016				
268																									
269																									
270																									
271																									
272																									
273																									
274																									
275																									
276	0.000	0.000	0.009	0.018	0.000	0.851	2.815	0.756	0.000	0.000	0.000	0.000	0.000	0.000	0	35	0	65	08/06/2016	16/06/2016					
277																			18/10/2013	28/10/2013					
278																			16/01/2008	25/02/2008	14/04/2008	11/06/2014		02/08/2010	
279	0.000	0.000	0.037	1.890	1.792	0.439	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0	08/07/2013	19/07/2013	11/03/2014	31/03/2015		27/07/2015	16/02/2017
280																			13/05/2014	21/05/2014	16/06/2014	31/08/2015		30/09/2015	
281																			15/09/2014	25/09/2014	09/11/2014	30/03/2015			
282																			04/08/2015	05/08/2015	18/01/2016	27/03/2017		29/07/2016	
283																			05/03/2016	09/03/2016					
284																			28/10/2016	01/11/2016	07/11/2016				
285																									
286	0.147	0.277	0.443	7.982	9.432	0.978	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	41	0	59	08/10/2012	15/10/2012	01/04/2013	30/09/2015		30/09/2015	
287	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0			17/10/2005	12/01/2012		29/10/2007	
288	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	07/10/2013	16/10/2013	08/08/2011	01/07/2015		30/03/2015	01/07/2015
289	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	31/01/2012	07/02/2012	25/07/2011	07/02/2012		01/08/2011	28/02/2012
290	0.000	0.000	0.000	0.292	3.429	0.525	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0	20/06/2013	27/06/2013	31/01/2014	27/03/2015		31/07/2015	
291																			14/05/2013	22/05/2013	31/05/2013	14/01/2015		29/08/2014	
292	0.000	0.000	0.000	0.000	0.000	0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	28/05/2015	29/05/2015					
293																									
294																			14/11/2014	20/11/2014		12/12/2014			17/02/2015
295																									
296																			08/02/2016	08/02/2016	16/01/2017			02/06/2017	
297																									
298																									
299																									
300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0			14/01/2008	21/03/2012		23/02/2009	
301	0.000	0.000	0.019	0.055	0.108	0.000	0.000	0.000	0.000	3.384	5.517	0.000	0.000	0.000	0	0	0	100							
302																			20/03/2014	25/03/2014	07/04/2014	31/07/2014		26/05/2014	
303																			16/12/2014	18/12/2014	26/01/2015	29/06/2015			
304																			18/05/2015	27/05/2015		01/07/2015		27/03/2015	01/07/2015
305																			27/06/2016	28/06/2016					
306																			05/03/2016	09/03/2016					
307	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	20/09/2012	15/10/2012	03/04/2013	27/08/2014		09/04/2014	02/09/2014
308																			17/10/2014	21/10/2014	12/09/2013	26/02/2016		20/08/2015	29/02/2016
309																									
310																									
311																									
312	0.001	0.024	0.089	0.465	0.603	0.613	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	35	0	65	16/01/2012	13/02/2012	02/06/2014	27/03/2015		05/10/2015	20/09/2016
313	0.000	0.000	0.000	0.000	0.000	0.614	0.610	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	29/01/2015	30/01/2015	02/05/2016			31/05/2017	
314																			31/10/2016	02/11/2016					
315																			06/01/2014	14/01/2014	20/01/2014	29/08/2014		26/05/2014	
316																			17/01/2014	10/02/2014	24/02/2014	30/01/2015		26/05/2014	01/07/2015
317																									
318																			29/01/2016	29/01/2016	31/10/2016				
319																			14/10/2016	17/10/2016	04/07/2016				
320																									
321																									
322	0.000	0.000	0.000	0.000	0.000	0.324	0.322	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0	0	0	100	20/10/2014	22/10/2014					
323																			30/04/2015	04/06/2015					
324																			30/06/2015	03/08/2015					
325	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	27/02/2007	05/03/2007	30/07/2007	11/02/2010		28/02/2011	02/12/2011
326	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0			01/05/2006	15/03/2012		31/01/2011	
327	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	22/10/2010	19/11/2010	07/02/2011	24/02/2012		23/04/2012	
328	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.347	0.000	0.000	0.000	43	27	0	30	02/12/2015	03/12/2015	27/02/2017			29/09/2017	
329	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0							
330	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	05/02/2014	10/02/2014	04/08/2014	19/02/2015		27/02/2015	01/07/2015
331																									
332	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	43	27	0	30							
333																			31/03/2014	14/04/2014	09/06/2014	07/07/2014		30/06/2014	20/11/2014
334																			12/10/2015	15/10/2015	25/01/2016	28/03/2016			04/04/2016
335																			12/02/2016	19/02/2016					
336																			11/12/2015	14/12/2015	31/10/2016			28/04/2017	
337																			04/12/2015	10/12/2015	01/09/2016	31/03/2017		31/03/2017	
338																			19/09/2016	22/09/2016					
339																			20/10/2016	24/10/2016					
340																			09/10/2014	15/10/2014	15/08/2014	30/01/2015			30/03/2015
341																			29/07/2016	01/08/2016					
342																									
343																									
344																									
345																									
346																									
347																									
348																									
349	0.013	0.498	1.050	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	36	35	0	29	26/10/2011	28/10/2011	28/02/2012	21/03/2013		26/03/2013	
350	0.006	0.040	0.032	1.120	0.444	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	39	40	0	21	19/12/2011	04/01/2012	11/02/2013	16/12/2013		30/06/2014	
351	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0							
352	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	19/06/2008	09/07/2008					
353																			21/05/2008	05/08/2008					
354	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	30/04/2009	18/05/2009					
355	0.000	0.038	0.033	0.516	1.590	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	57	28	0	15	05/01/2012	10/01/2012		04/02/2014			
356	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	19/10/2016	08/11/2016					
357	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	28/06/2016	04/07/2016					
358	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0							
359	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	07/06/2013	17/06/2013	17/02/2014	24/10/2014		31/03/2017	
360	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	07/06/2013	17/06/2013	17/02/2014	20/02/2015		31/03/2017	
361																									
362	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0							
363																									
364	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	06/03/2014	13/03/2014					
365	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	19/11/2012	22/11/2012	30/11/2012	31/03/2014		30/05/2014	12/01/2015
366	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	19/11/2012	22/11/2012	30/11/2012	18/12/2014		26/09/2014	12/01/2015
367																									
368	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	19/11/2012	22/11/2012	30/11/2012	09/10/2013		28/03/2014	13/03/2014
369																									
370																			28/11/2013	17/12/2013	28/04/2014	20/02/2015		18/02/2015	24/08/2015
371																			15/05/2014	19/05/2014	31/01/2014	05/01/2016		25/06/2015	05/01/2016
372																			02/08/2016	02/08/2016					
373																			01/06/2016	01/06/2016	17/10/2016	18/01/2017		31/03/2017	
374																			11/08/2015	19/08/2015	28/03/2016	31/08/2016		29/04/2016	
375																			23/09/2014	24/09/2014	03/10/2014	12/03/2015			07/09/2015
376																									
377																			14/10/2016	25/10/2016					
378																									
379																			03/02/2017	01/03/2017					
380																									
381																			27/01/2017	02/02/2017					
382	0.010	0.006	0.074	0.000	0.269	3.625	5.544	0.000	0.000	0.000	0.000	0.000	0.000	0.000	85	10	0	6	09/06/2014	03/07/2014					
383	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.096	0.000	0.000	0.000	0.000	0.000	0.000	56	19	0	25	07/12/2015	10/12/2015					
384	0.000	0.000	0.000	0.000	0.000	1.077	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0	21/11/2014	25/11/2014					
385	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	15/09/2016	15/09/2016					
386	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	03/10/2012	16/10/2012	07/10/2015	30/10/2015		19/10/2015	21/11/2016
387	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	19/11/2012	22/11/2012	30/11/2012	01/12/2014		25/07/2014	12/01/2015
388	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0							
389																			08/07/2013	19/07/2013	03/02/2014	31/03/2014		03/02/2014	03/11/2014
390																									
391																			22/05/2015	02/06/2015					
392	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.085	0.000	0.000	0.000	43	27	0	30							
393																			15/03/2016	22/03/2016					
394																									
395																			23/02/2016	29/02/2016					
396																									
397																									
398																									
399																									
400																			08/12/2016	19/12/2016					
401																									
402	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	14/11/2008	19/11/2008	12/01/2009	02/04/2010		29/03/2010	
403	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0		07/08/2006	23/07/2007	23/11/2009		02/03/2009	
404	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	21/04/2010	07/05/2010	02/04/2012	29/11/2012		09/09/2013	
405																					04/09/2006			01/09/2008	
406	0.000	0.000	0.000	0.032	0.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	45	0	0	55	13/09/2016	20/09/2016					
407	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	04/12/2012	11/12/2012	12/12/2016			31/03/2017	
408	0.000	0.004	0.000	0.212	0.995	0.000	0.000	0.000	0.000	0.000	1.284	0.000	0.000	0.000	43	27	0	30							
409	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0							
410	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.743	6.126	6.117	6.096	0.000	0.000	0.000	43	27	0	30							
411	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	08/05/2014	12/05/2014					
412	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	23/05/2012	29/05/2012	07/01/2013	02/06/2014		23/12/2013	01/07/2015
413	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	19/11/2012	22/11/2012	30/11/2012	14/01/2015		28/03/2014	14/01/2015
414																			09/02/2015	16/02/2015	22/06/2015	28/03/2016		30/06/2016	
415																									
416																									
417	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	15/12/2014	17/12/2014	28/09/2015	23/03/2017		31/03/2015	
418																			16/06/2016	17/06/2016					
419																									
420																									
421																									
422																			22/05/2015	02/06/2015	02/11/2015	30/11/2015		30/11/2015	12/02/2016
423																									
424																									
425																									
426																			19/01/2017	20/01/2017	30/01/2017			30/06/2017	
427																									
428																			02/03/2016	03/03/2016					
429																									
430																									
431																									
432																									
433	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	13/09/2016	15/09/2016					
434	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	02/02/2009	09/02/2009	04/05/2009			03/08/2009	
435	0.000	0.000	0.000	0.623	1.903	0.116	1.404	0.930	0.000	0.000	0.000	0.000	0.000	0.000	62	31	0	7	15/12/2010	12/01/2011		30/05/2016			
436	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	15/12/2010	12/01/2011	01/04/2011	03/05/2013		01/10/2012	
437	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0							
438	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	03/06/2016	06/06/2016					
439	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	12/05/2014	16/05/2014	29/06/2015	14/12/2016			03/02/2017
440	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	15/10/2012	25/10/2012					
441	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	16/11/2012	22/11/2012	30/11/2012	31/10/2014		29/11/2013	03/11/2014
442																									
443																									
444	0.000	0.000	0.000	0.000	0.000	0.229	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	14	86	0	0	10/03/2014	13/03/2014	04/05/2015	31/03/2015		29/06/2015	

Sort Ref (1)	Current Actual or Projected Service Allocation Water Infrastructure (47)	Current Actual or Projected Service Allocation Water Non-Infrastructure (48)	Current Actual or Projected Service Allocation Sewerage Infrastructure (49)	Current Actual or Projected Service Allocation Sewerage Non-Infrastructure (50)	Current Actual or Projected CAPEX Year to date £m (51)	Current Actual or Projected CAPEX 2010-11 £m (52)	Current Actual or Projected CAPEX 2011-12 £m (53)	Current Actual or Projected CAPEX 2012-13 £m (54)	Current Actual or Projected CAPEX 2013-14 £m (55)	Current Actual or Projected CAPEX 2014-15 £m (56)	Current Actual or Projected CAPEX 2015-16 £m (57)	Current Actual or Projected CAPEX 2016-17 £m (58)	Current Actual or Projected CAPEX 2017-18 £m (59)	Current Actual or Projected CAPEX 2018-19 £m (60)	Current Actual or Projected CAPEX 2019-20 £m (61)	Current Actual or Projected CAPEX 2020-21 £m (62)	Current Actual or Projected CAPEX 2021-22 £m (63)	Current Actual or Projected CAPEX 2022-23 £m (64)	Current Actual or Projected CAPEX 2023-24 £m (65)	Current Actual or Projected Purpose Allocation Quality (66)	Current Actual or Projected Purpose Allocation Base (67)	Current Actual or Projected Purpose Allocation ESL (68)	Current Actual or Projected Purpose Allocation Growth (69)	Current Actual or Projected IRE Allocation Water (70)	Current Actual or Projected IRE Allocation Sewerage (71)	Nominated Output (72)
	Current Actual or Projected Service Cost Allocation				Current Actual or Projected Capital Expenditure Profile (£m money of the day)															Current Actual or Projected Purpose Allocation (%)				Current Actual or Projected IRE (%)		Nominated outputs (PC Period)
220	100	0	0	0	0.008	0.000	0.000	0.000	0.000	0.000	0.071	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
221	100	0	0	0	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.200	0.200	1.156	2.494	1.492	0.000	0.000	0	100	0	0	100	0	01
222	0	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0	01
223	0	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0	01
224	0	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0	01
225	0	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0	
226	0	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0	01
227	0	100	0	0	0.015	0.000	0.000	0.000	0.000	0.000	0.055	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15	85	0	0	0	0	01
228	0	100	0	0	0.053	0.000	0.000	0.000	0.000	0.000	0.000	0.053	0.110	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
229	100	0	0	0	0.342	0.000	0.000	0.000	0.000	0.000	0.000	0.342	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0	95	5	0	95	0	01
230	100	0	0	0	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
231	100	0	0	0	0.512	0.000	0.000	0.000	0.000	0.000	0.000	0.512	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0	60	7	33	60	0	01
232	100	0	0	0	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.035	0.000	0.000	0.000	0.000	0.000	0.000	30	60	7	3	60	0	01
233	0	100	0	0	0.081	0.000	0.000	0.000	0.000	0.000	0.000	0.081	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0	0	0	01
234	0	100	0	0	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.056	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
235	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.140	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
236	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.460	0.000	0.000	0.000	0.000	0.000	0.000	0	60	7	33	60	0	01
237	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.125	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
238	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
239	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
240	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.460	0.000	0.000	0.000	0.000	0.000	0.000	0	95	5	0	95	0	01
241	100	0	0	0	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
242	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	
243	99	1	0	0	-0.027	0.006	0.064	0.032	0.014	-0.003	0.045	-0.027	0.000	0.000	0.000	0.000	9.096	1.500	0.000	0	0	0	100	0	0	03
244	89	11	0	0	0.045	0.021	-0.008	0.016	0.076	0.036	0.100	0.045	0.080	4.230	4.150	2.200	0.000	0.000	0.000	0	0	0	100	0	0	02
245	100	0	0	0	0.001	0.345	0.150	0.016	0.008	0.002	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	25	0	75	25	0	
246	0	100	0	0	0.001	0.000	0.000	0.003	0.012	0.152	0.368	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
247	0	100	0	0	0.015	0.000	0.000	0.004	0.027	0.021	0.322	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
248	0	100	0	0	0.132	0.000	0.000	0.005	0.022	0.010	0.006	0.132	2.120	2.119	0.000	0.000	0.000	0.000	0.000	0	72	28	0	0	0	01
249	0	100	0	0	0.009	0.000	0.000	0.005	0.059	0.007	0.004	0.009	0.006	2.000	4.434	2.650	0.000	0.000	0.000	89	11	0	0	0	0	02
250	0	100	0	0	0.005	0.000	0.000	0.003	0.024	0.049	0.067	0.005	0.002	0.000	2.667	4.008	0.000	0.000	0.000	0	100	0	0	0	0	01
251	0	100	0	0	-0.001	0.000	0.000	0.000	0.009	0.346	0.094	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
252	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.034	-0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
253	89	6	5	0	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	89	5	01
254	0	100	0	0	-0.655	1.536	0.210	0.020	0.147	0.000	0.010	-0.655	0.000	0.000	0.000	0.000	0.000	0.000	0.000	51	49	0	0	0	0	
255	0	100	0	0	0.014	0.000	0.000	0.002	0.013	0.005	0.009	0.014	0.000	0.375	0.000	0.000	0.000	0.000	0.000	7	93	0	0	0	0	01
256	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.070	0.000	0.000	0.000	0.000	0.000	0.000	35	40	0	25	0	0	01
257	0	100	0	0	0.045	0.000	0.000	0.010	0.003	0.013	0.471	0.045	0.601	0.000	0.600	2.251	0.000	0.000	0.000	38	51	0	11	0	0	01
258	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
259	88	12	0	0	0.010	0.000	0.000	0.000	0.510	2.025	-0.023	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	32	56	0	12	56	0	01
260	100	0	0	0	-0.054	0.000	0.000	0.000	0.420	1.895	0.618	-0.054	0.005	0.000	0.000	0.000	0.000	0.000	0.000	19	74	0	7	74	0	01
261	65	35	0	0	0.306	0.000	0.000	0.000	0.000	0.015	0.005	0.306	0.386	0.000	0.000	0.000	0.000	0.000	0.000	0	47	44	9	12	0	01
262	100	0	0	0	-0.015	0.000	0.000	0.000	0.000	0.000	0.015	-0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
263	100	0	0	0	0.197	0.000	0.000	0.000	0.000	0.000	0.030	0.197	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
264	100	0	0	0	0.094	0.000	0.000	0.000	0.000	0.000	0.030	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
265	78	22	0	0	0.903	0.000	0.000	0.000	0.000	0.000	0.000	0.903	0.614	0.000	0.000	0.000	0.000	0.000	0.000	0	84	0	16	68	0	01
266	100	0	0	0	0.692	0.000	0.000	0.000	0.000	0.000	0.000	0.692	1.144	0.417	0.000	0.000	0.000	0.000	0.000	11	89	0	0	89	0	01
267	100	0	0	0	1.399	0.000	0.000	0.000	0.000	0.000	0.000	1.399	1.102	0.260	0.000	0.000	0.000	0.000	0.000	14	86	0	0	86	0	01
268	0	100	0	0	0.283	0.000	0.000	0.000	0.000	0.000	0.000	0.283	0.027	2.000	2.600	0.000	0.000	0.000	0.000	95	5	0	0	0	0	03
269	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
270	100	0	0	0	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.624	0.000	0.000	0.000	0.000	0.000	0.000	0	70	0	30	70	0	01
271	100	0	0	0	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.224	0.000	0.000	0.000	0.000	0.000	0.000	0	70	0	30	70	0	01
272	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.450	1.550	0.000	0.000	0.000	0.000	0.000	1	48	0	51	48	0	01
273	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.450	1.550	0.000	0.000	0.000	0.000	0.000	9	88	0	3	88	0	01
274	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.450	1.550	0.000	0.000	0.000	0.000	0.000	1	66	0	33	66	0	01
275	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.450	1.550	0.000	0.000	0.000	0.000	0.000	5	94	0	1	94	0	01
276	0	100	0	0	0.194	0.000	0.000	0.000	0.000	0.000	0.000	0.194	0.834	3.971	1.982	0.000	0.000	0.000	0.000	0	34	0	66	0	0	02
277	0	100	0	0	0.010	0.000	0.000	0.006	0.029	0.060	-0.014	0.010	0.000	0.000	0.000	0.000	0.644	1.000	0.000	95	0	5	0	0	0	03
278	100	0	0	0	0.000	0.000	0.000	0.003	0.000	0.000	-0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
279	0	100	0	0	0.070	0.000	0.000	0.008	0.717	3.777	0.331	0.070	0.004	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0	0	0	08
280	100	0	0	0	-0.001	0.000	0.000	0.000	0.273	1.782	0.132	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	48	46	0	6	46	0	01
281	100	0	0	0	-0.011	0.000	0.000	0.000	0.000	0.011	0.000	-0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
282	0	100	0	0	0.176	0.000	0.000	0.000	0.000	0.012	0.343	0.176	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
283	0	100	0	0	1.755	0.000	0.000	0.000	0.000	0.000	0.005	1.755	1.270	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
284	65	35	0	0	0.614	0.000	0.000	0.000	0.000	0.000	0.000	0.614	0.242	0.000	0.000	0.000	0.000	0.000	0.000	0	90	0	10	65	0	01
285	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.150	1.250	0.600	0.000	0.000	0.000	0.000	35	65	0	0	65	0	01
286	85	15	0	0	-0.465	0.147	0.284	0.259	5.104	12.295	2.929	-0.465	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0	40	0	60	34	0	02
287	100	0	0	0	0.000	0.000	0.241	0.011	-1.274	0.042	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	
288	100	0	0	0	0.000	0.000	0.136	-0.013	0.401	1.412	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	66	34	0	0	34	0	
289	100	0	0	0	0.000	0.000	0.155	-0.001	0.000	0.000	0.000	0.000	-0.200	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	
290	0	100	0	0	-0.049	0.000	0.000	0.008	0.489	4.469	0.244	-0.049	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0	0	0	08
291	99	1	0	0	0.000	0.000	0.000	0.000	1.789	0.455	0.076	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	77	10	10	3	10	0	01
292	100	0	0	0	0.011	0.000	0.000	0.005	0.011	0.000	0.096	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
293	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
294	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.014	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
295	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.049	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
296	0	100	0	0	0.055	0.000	0.000	0.000	0.000	0.000	0.020	0.055	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
297	0	100	0	0	-0.007	0.000	0.000	0.000	0.000	0.000	0.017	-0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
298	100	0	0	0	0.070	0.000	0.000	0.000	0.000	0.000	0.000	0.070	0.050	0.000	0.000	0.000	0.000	0.000	0.000	40	60	0	0	60	0	01
299	0	100	0	0	0.178	0.000	0.000	0.000	0.000	0.000	0.000	0.178	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
300	99	1	0	0	0.000	0.000	-0.010	0.000	0.000	0.000	-0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	37	21	36	6	21	0	01
301	0	100	0	0	0.005	0.000	0.000	0.000	0.028	0.000	0.012	0.005	0.138	0.089	4.925	4.941	0.098	0.000	0.000	0	0	0	100	0	0	02
302	0	100	0	0	0.000	0.000	0.000	0.000	0.008	0.058	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	
303	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.110	0.010	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0	0	0	01
304	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.010	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
305	0	100	0	0	0.075	0.000	0.000	0.000	0.000	0.000	0.017	0.075	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
306	0	100	0	0	1.950	0.000	0.000	0.000	0.000	0.000	0.005	1.950	0.481	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
307	60	0	40	0	0.000	0.000	0.000	0.029	1.077	-0.123	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	97	0	3	60	37	
308	100	0	0	0	0.073	0.000	0.000	0.000	0.298	1.322	0.436	0.073	0.005	0.000	0.000	0.000	0.000	0.000	0.000	14	84	0	2	84	0	01
309	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
310	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
311	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.150	1.250	0.600	0.000	0.000	0.000	0.000	77	23	0	0	23	0	01
312	0	100	0	0	0.000	0.001	0.025	0.094	0.049	0.734	0.687	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	34	0	66	0	0	08
313	100	0	0	0	1.865	0.000	0.000	0.000	0.044	0.352	0.450	1.865	0.299	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
314	100	0	0	0	0.016	0.000	0.000	0.000	0.006	0.012	0.004	0.016	0.294	0.000	0.000	0.000	0.000	0.000	0.000	0	95	5	0	95	0	01
315	100	0	0	0	0.000	0.000	0.000	0.000	0.211	0.068	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
316	100	0	0	0	0.000	0.000	0.000	0.000	0.100	0.288	0.001	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000	13	77	0	10	77	0	01
317	0	100	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0	0	0	01
318	0	50	0	50	0.025	0.000	0.000	0.000	0.000	0.000	0.030	0.025	0.425	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
319	100	0	0	0	0.624	0.000	0.000	0.000	0.000	0.000	0.000	0.624	1.380	1.798	0.000	0.000	0.000	0.000	0.000	26	69	5	0	69	0	01
320	100	0	0	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.150	1.250	0.600	0.000	0.000	0.000	0.000	17	54	0	29	54	0	01
321	0	100	0	0	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.202	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
322	100	0	0	0	0.305	0.000	0.000	0.000	0.000	0.002	0.182	0.305	0.080	0.000	0.000	0.000	0.000	0.000	0.000	10	60	10	20	60	0	02
323	100	0	0	0	0.036	0.000	0.000	0.000	0.000	0.000	0.312	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	100	0	01
324	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	100	01
325	0	0	15	85	0.000	1.033	0.371	-0.001	-0.001	-0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	48	32	0	20	0	5	09
326	0	0	14	86	0.000	0.015	0.309	0.014	0.000	0.025	-0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	72	15	0	13	0	0	09
327	0	0	30	70	-0.003	0.078	0.086	0.087	0.006	-0.001	0.000	-0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30	45	0	25	0	28	
328	0	0	0	100	0.065	0.000	0.006	0.007	0.007	0.004	0.031	0.065	1.136	0.046	0.000	0.000	0.000	0.000	0.000	25	42	0	33	0	0	02
329	0	0	40	60	0.000	0.000	0.000	0.009	0.012	0.000	0.000	0.000	0.000	0.405	0.000	0.000	0.000	0.000	0.000	100	0	0	0	0	0	03
330	0	0	0	100	0.000	0.000	0.000	0.003	0.006	0.046	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	44	56	0	0	0	0	01
331	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.117	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
332	0	0	0	100	0.000	0.000	0.000	0.000	0.043	0.034	0.018	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	44	26	0	30	0	0	03
333	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.023	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
334	0	0	0	100	0.001	0.000	0.000	0.000	0.003	-0.003	0.215	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
335	0	0	0	100	0.349	0.000	0.000	0.000	0.002	0.013	0.000	0.349	0.040	0.006	0.000	0.000	0.000	0.000	0.000	70	18	0	12	0	0	01
336	0	0	0	100	0.433	0.000	0.000	0.000	0.003	0.017	0.001	0.433	0.024	0.000	0.000	0.000	0.000	0.000	0.000	73	16	0	11	0	0	03
337	0	0	0	100	0.187	0.000	0.000	0.000	0.002	0.022	0.000	0.187	0.000	0.000	0.000	0.000	0.000	0.000	0.000	55	20	0	25	0	0	03
338	0	0	0	100	0.000	0.000	0.000	0.000	0.001	0.013	0.000	0.000	0.097	0.296	0.030	0.000	0.000	0.000	0.000	40	48	0	12	0	0	03
339	0	0	0	100	0.019	0.000	0.000	0.000	0.004	0.011	0.004	0.019	0.221	0.348	0.058	0.000	0.000	0.000	0.000	52	35	0	13	0	0	03
340	0	0	0	100	0.000	0.000	0.000	0.000	0.000	1.325	-0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
341	0	0	0	100	0.010	0.000	0.000	0.000	0.000	0.000	0.028	0.010	0.014	0.026	0.035	0.808	0.000	0.000	0.000	54	36	0	10	0	0	03
342	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.087	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
343	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.155	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
344	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.056	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
345	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.123	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
346	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.119	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
347	0	0	0	100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.200	0.000	0.000	0	53	0	47	0	0	03
348	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.107	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
349	0	0	0	100	0.000	0.013	0.510	1.339	0.080	-0.031	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	36	35	0	29	0	0	
350	0	0	19	81	0.003	0.006	0.041	0.502	1.094	0.134	-0.010	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	39	40	0	21	0	7	08
351	0	0	0	100	0.000	0.000	0.002	0.015	0.010	0.003	0.000	0.000	0.000	0.000	0.000	1.303	0.000	0.000	0.000	16	26	0	58	0	0	03
352	0	0	100	0	0.000	0.000	0.022	0.000	-0.035	0.000	-0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
353	0	0	100	0	0.000	0.000	0.000	0.014	-0.013	0.001	-0.002	0.000	0.000	0.000	0.000	0.054	0.000	0.000	0.000	0	0	0	100	0	0	01
354	0	0	80	20	0.000	0.531	6.576	0.078	0.023	0.114	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	90	0	0	10	0	0	09
355	0	0	0	100	-0.007	0.000	0.039	0.424	0.941	0.200	-0.010	-0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	57	28	0	15	0	0	08
356	0	0	0	100	0.015	0.000	0.006	0.008	0.011	0.001	0.000	0.015	1.130	1.452	0.000	0.000	0.000	0.000	0.000	5	33	0	62	0	0	03
357	0	0	0	100	0.057	0.000	0.006	0.005	0.012	0.000	0.020	0.057	0.040	0.100	0.000	1.286	0.000	0.000	0.000	32	53	0	15	0	0	03
358	0	0	0	100	0.012	0.000	0.006	0.008	0.011	0.005	0.006	0.012	0.000	0.000	1.000	0.000	0.000	0.000	0.000	45	15	0	40	0	0	03
359	0	0	0	100	0.016	0.000	0.003	0.002	0.026	0.028	0.001	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
360	0	0	0	100	0.014	0.000	0.003	0.002	0.027	0.028	0.001	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
361	0	0	0	100	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.003	0.030	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
362	0	0	0	100	0.000	0.000	0.000	0.005	-0.001	0.001	0.001	0.000	0.055	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
363	0	0	85	15	0.000	0.000	0.000	0.000	0.000	0.008	0.002	0.000	0.102	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	85	01
364	0	0	100	0	0.002	0.000	0.000	0.033	0.000	0.023	-0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	100	01
365	0	0	0	100	0.000	0.000	0.000	0.033	0.172	0.006	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	
366	0	0	0	100	0.000	0.000	0.000	0.063	0.278	0.071	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	
367	0	0	0	100	0.000	0.000	0.000	0.004	0.002	0.000	0.000	0.000	0.020	0.000	1.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	03
368	0	0	0	100	0.000	0.000	0.000	0.016	0.043	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
369	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.039	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
370	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.233	-0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	100	01
371	0	0	0	100	0.000	0.000	0.000	0.000	0.010	0.288	0.211	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
372	0	0	0	100	0.000	0.000	0.000	0.000	0.025	0.000	-0.007	0.000	0.000	0.000	0.000	0.000	1.484	1.484	0.000	44	26	0	30	0	0	03
373	0	0	0	100	0.212	0.000	0.000	0.000	0.000	0.013	-0.001	0.212	0.003	0.000	0.000	0.000	0.000	0.000	0.000	20	51	0	29	0	0	03
374	0	0	100	0	0.144	0.000	0.000	0.000	0.000	0.014	0.044	0.144	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	100	0	0	0	01
375	0	0	0	100	0.000	0.000	0.000	0.000	0.000	0.488	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	63	0	37	0	0	01
376	0	0	100	0	0.055	0.000	0.000	0.000	0.000	0.000	0.058	0.055	0.520	0.250	0.000	0.000	0.000	0.000	0.000	0	50	50	0	0	50	01
377	0	0	100	0	0.011	0.000	0.000	0.000	0.000	0.000	0.012	0.011	0.160	0.000	0.000	0.000	0.000	0.000	0.000	0	0	100	0	0	0	01
378	0	0	100	0	0.016	0.000	0.000	0.000	0.000	0.000	0.012	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	75	15	10	0	75	01
379	0	0	100	0	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
380	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.037	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
381	0	0	0	100	0.049	0.000	0.000	0.000	0.000	0.000	0.000	0.049	7.263	1.391	0.000	0.000	0.000	0.000	0.000	15	85	0	0	0	0	01
382	0	0	10	90	3.625	0.010	0.006	0.040	0.121	0.278	1.287	3.625	1.052	0.413	0.150	0.000	0.000	0.000	0.000	85	9	0	6	0	0	02
383	0	0	0	100	0.052	0.019	-0.025	0.065	-0.004	0.023	0.062	0.052	1.270	0.699	0.265	0.000	0.000	0.000	0.000	74	1	0	25	0	0	02
384	0	0	100	0	0.375	0.053	0.038	0.046	0.040	0.349	0.041	0.375	0.573	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0	0	0	02
385	0	0	0	100	0.008	0.000	0.005	0.008	0.013	0.000	0.008	0.008	0.396	0.680	0.000	0.000	0.000	0.000	0.000	24	26	0	50	0	0	03
386	0	0	100	0	-0.004	0.000	0.001	0.008	0.000	0.001	0.037	-0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
387	0	0	0	100	0.000	0.000	0.000	0.048	0.158	0.073	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	
388	0	0	0	100	-0.008	0.000	0.000	0.002	0.000	-0.002	0.089	-0.008	0.000	0.000	0.000	0.000	0.500	0.000	0.000	30	70	0	0	0	0	03
389	0	0	100	0	0.000	0.000	0.000	0.000	0.026	0.000	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
390	0	0	0	100	0.008	0.000	0.000	0.000	0.025	0.000	0.000	0.008	0.002	0.000	0.000	0.500	0.000	0.000	0.000	44	26	0	30	0	0	03
391	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
392	0	0	0	100	0.016	0.000	0.000	0.000	0.020	0.010	0.008	0.016	0.061	0.200	1.000	1.500	0.000	0.000	0.000	44	26	0	30	0	0	02
393	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.067	0.000	0.000	0.400	0.000	0.000	0.000	100	0	0	0	0	0	03
394	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
395	0	0	0	100	4.278	0.000	0.000	0.000	0.000	0.000	0.189	4.278	0.084	0.000	2.750	3.750	0.000	0.000	0.000	0	100	0	0	0	0	01
396	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
397	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.200	0.000	0.000	0.000	0.000	0.000	0	40	60	0	0	40	01
398	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
399	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
400	0	0	0	100	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
401	0	0	100	0	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	100	01
402	0	0	80	20	0.000	0.215	0.158	-0.247	0.000	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0	0	0	09
403	0	0	73	27	0.000	0.001	0.012	0.000	0.000	0.000	-0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	36	0	0	64	0	0	01
404	0	0	2	98	0.000	2.733	2.251	0.601	0.019	0.015	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	21	46	0	33	0	1	
405	0	0	100	0	0.000	0.000	0.000	0.007	0.000	0.010	-0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	100	01
406	0	0	0	100	0.073	0.000	0.000	0.000	0.000	0.000	0.030	0.073	0.771	1.665	0.400	0.000	0.000	0.000	0.000	5	51	0	44	0	0	03
407	0	0	0	100	0.095	0.000	0.011	0.002	-0.001	0.000	0.007	0.095	0.018	0.006	0.000	0.000	0.000	0.000	0.000	4	86	0	10	0	0	01
408	0	0	0	100	0.020	0.000	0.004	0.020	-0.008	0.000	0.014	0.020	0.037	0.100	1.300	0.300	0.000	0.000	0.000	44	26	0	30	0	0	02
409	0	0	0	100	0.010	0.000	0.010	0.034	0.011	0.015	0.000	0.010	0.005	0.000	0.000	0.500	0.000	0.000	0.000	44	26	0	30	0	0	03
410	0	0	0	100	0.000	0.000	0.043	0.005	0.000	0.000	0.000	0.000	0.859	0.871	9.924	8.970	2.000	0.000	0.000	44	26	0	30	0	0	02
411	0	0	100	0	0.000	0.000	0.003	0.000	-0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
412	0	0	0	100	0.001	0.000	0.000	0.014	0.044	-0.008	0.005	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
413	0	0	0	100	0.000	0.000	0.000	0.224	0.567	0.283	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2	74	24	0	0	0	01
414	0	0	0	100	0.001	0.000	0.000	0.000	0.000	0.030	0.304	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	51	49	0	0	0	0	01
415	0	0	0	100	0.000	0.000	0.000	0.000	0.025	-0.003	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	44	26	0	30	0	0	03
416	0	0	0	100	0.008	0.000	0.000	0.000	0.015	0.000	0.000	0.008	0.002	0.000	0.000	0.000	0.500	0.000	0.000	44	26	0	30	0	0	03
417	0	0	0	100	0.238	0.000	0.000	0.000	0.005	0.033	0.268	0.238	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	03
418	0	0	0	100	-0.001	0.000	0.000	0.000	0.004	0.003	0.002	-0.001	0.048	0.272	0.039	0.000	0.000	0.000	0.000	54	0	0	46	0	0	01
419	0	0	0	100	0.009	0.000	0.000	0.000	0.025	-0.020	0.017	0.009	0.020	0.000	0.000	0.000	0.500	0.000	0.000	44	26	0	30	0	0	03
420	0	0	0	100	0.011	0.000	0.000	0.000	0.025	-0.013	-0.006	0.011	0.008	0.000	0.000	0.000	1.198	1.198	0.000	44	28	0	28	0	0	03
421	0	0	0	100	0.007	0.000	0.000	0.000	0.025	-0.013	-0.002	0.007	0.008	0.000	0.000	0.000	0.773	0.773	0.000	44	26	0	30	0	0	03
422	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
423	0	0	100	0	0.020	0.000	0.000	0.000	0.000	0.000	0.005	0.020	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	100	01
424	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
425	0	0	35	65	0.006	0.000	0.000	0.000	0.000	0.002	0.012	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30	30	40	0	0	0	01
426	0	0	0	100	0.287	0.000	0.000	0.000	0.000	0.000	0.018	0.287	0.313	0.000	0.000	0.000	0.000	0.000	0.000	63	33	0	4	0	0	03
427	0	0	0	100	0.033	0.000	0.000	0.000	0.000	0.000	0.016	0.033	0.146	0.700	0.000	0.000	0.000	0.000	0.000	65	35	0	0	0	0	03
428	0	0	0	100	5.079	0.000	0.000	0.000	0.000	0.000	0.020	5.079	0.000	4.000	4.000	4.000	0.000	0.000	0.000	0	100	0	0	0	0	01
429	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
430	0	0	100	0	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.082	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
431	0	0	0	100	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.029	0.003	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
432	0	0	100	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.175	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	03
433	0	0	0	100	0.076	0.000	0.022	0.019	0.020	0.035	0.029	0.076	2.220	1.679	0.467	0.000	0.000	0.000	0.000	0	88	0	12	0	0	03
434	0	0	100	0	0.000	-0.003	-0.003	0.001	0.000	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0	0	100	01
435	0	0	93	7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.133	1.030	1.000	0.300	0.000	0.000	0.000	63	30	0	7	0	28	02
436	20	0	80	0	0.000	0.000	0.964	0.376	-0.026	-0.012	-0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	65	29	5	1	10	19	01
437	0	0	100	0	0.000	0.000	0.000	0.004	0.005	-0.001	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0	0	100	0	0	0	01
438	0	0	0	100	0.003	0.000	0.000	0.005	-0.001	0.000	0.000	0.003	0.009	0.022	0.168	0.000	0.000	0.000	0.000	0	100	0	0	0	0	01
439	0	0	0	100	0.083	0.000	0.000	0.003	0.008	0.005	0.168	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	03
440	0	0	100	0	0.000	0.000	0.000	0.005	0.008	0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	
441	0	0	0	100	0.000	0.000	0.000	0.120	0.479	0.026	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7	77	16	0	0	0	
442	0	0	100	0	0.001	0.000	0.000	0.002	0.007	0.000	0.000	0.001	0.000	0.210	0.000	0.000	0.000	0.000	0.000	0	0	0	100	0	0	01
443	0	0	0	100	0.013	0.000	0.000	0.000	0.023	0.000	-0.018	0.013	0.003	0.000	0.000	0.500	0.000	0.000	0.000	44	26	0	30	0	0	03
444	0	0	0	100	0.100	0.000	0.000	0.000	0.010	1.057	0.200	0.100	0.104	0.000	0.000	0.000	0.000	0.000	0.000	15	85	0	0	0	0	01



Sort Ref	CIM Submission Reference	Project ID Reference	Project Name	PC Project Period	Parent Project ID	Substitute Project ID	Primary Asset Category	PC10 Programme	Regulatory Sign-Off Required
1	2	3	4	5	6	7	8	9	10
670	2016_17 Q4	KL520	37 Limavady Road, Derry Storm Sewer Ext	00	KI538		07	24	
671	2016_17 Q4	KL529	St Peter"s High School Re-Development F&S Sewer	00	KI538		07	24	
672	2016_17 Q4	KN627	Meadowvale, Dublin Rd, N'townstewart, Foul Sewer Extension.	00	KI538		07	24	
673	2016_17 Q4	KN660	Lisnaragh Road Donemana Foul sewer Extension	00	KI538		07	24	
674	2016_17 Q4	KP601	Enniskillen Road Ballinamallard Storm Sewer Extension	00	KI538		07	24	
675	2016_17 Q4	KP678	Coa Road, Enniskillen Storm Sewer Ext.	00	KI538		07	24	
676	2016_17 Q4	KR361	Carrowreagh Road Dundonald Storm Sewer	00	KI538		07	24	
677	2016_17 Q4	KR397	Brooke Hall, Cairnshill Belfast Foul Sewer Extension	00	KI538		07	24	
678	2016_17 Q4	KR422	Mersey Street, Belfast Storm Sewer	00	KI538		07	24	
679	2016_17 Q4	KR429	York Street, Belfast Interchange	00	KI538		07	24	
680	2016_17 Q4	KR463	Circular Road Belfast, Storm Sewer Extension	00	KI538		07	24	
681	2016_17 Q4	KR490	Donegal Avenue Whitehead Foul Sewer Extension	00	KI538		07	24	
682	2016_17 Q4	KR493	Ballyrobert Road Ballyclare Storm Sewer Extension	00	KI538		07	24	
683	2016_17 Q4	KR509	Carrickfergus Public Realm Sewers	00	KI538		07	24	
684	2016_17 Q4	KR511	Ravenhill Road Belfast - Storm Sewer Extension	00	KI538		07	24	
685	2016_17 Q4	KR533	Springfield Crescent, Belfast, Storm Sewer Extension	00	KI538		07	24	
686	2016_17 Q4	KR541	Lower Stanfield Street, Belfast, Storm Sewer Extension	00	KI538		07	24	
687	2016_17 Q4	KR571	Drumbeg Road Storm Sewer Extension	03	KI538		07	24	
688	2016_17 Q4	KR573	Mill Road. Newtownabbey, Storm Sewer Extension	00	KI538		07	24	
689	2016_17 Q4	KR577	165 Groomsport Rd, Bangor - Storm Sewer Upgrade	00	KI538		07	24	
690	2016_17 Q4	KR578	Ferry Quarter, Shore Road, Strangford foul and storm sewer	00	KI538		07	24	
691	2016_17 Q4	KR582	Torrens Park Belfast Storm Sewer	00	KI538		07	24	
692	2016_17 Q4	KR583	Victoria Road, Belfast - Foul Sewer Extension and Storm Separ	00	KI538		07	24	
693	2016_17 Q4	KR584	Glenville Rd, Newtownabbey - Storm Sewer	00	KI538		07	24	
694	2016_17 Q4	KR587	Glenwell Rd, Newtownabbey Storm Sewer	00	KI538		07	24	
695	2016_17 Q4	KR590	Ballygowan Road Belfast Storm Sewer Extension	00	KI538		07	24	
696	2016_17 Q4	KR591	137-141 Ormeau Road Belfast Storm Sewer Extension	00	KI538		07	24	
697	2016_17 Q4	KR592	QUB Medical Centre University Terrace Storm Sewer Extension	00	KI538		07	24	
698	2016_17 Q4	KR593	Glenmachan Street Belfast Storm Sewer for McDonalds	00	KI538		07	24	
699	2016_17 Q4	KR597	Ballynure Road, Ballyclare Storm Sewer Extension	00	KI538		07	24	
700	2016_17 Q4	KR607	Galway Park & Galway Drive, Dundonald Storm Sewer	00	KI538		07	24	
701	2016_17 Q4	KR609	Former Visteon Site Belfast Foul & Storm Sewer Extension	00	KI538		07	24	
702	2016_17 Q4	KR613	Site at 9-11 Ballycraigy Rd, Foul and Storm Sewer	00	KI538		07	24	
703	2016_17 Q4	KR615	530 Shore Road, Belfast	00	KI538		07	24	
704	2016_17 Q4	KR616	172 North Road, Carrickfergus Storm Sewer Ext.	00	KI538		07	24	
705	2016_17 Q4	KS822	Ballywalter Road, Millisle Storm Sewer Extension	00	KI538		07	24	
706	2016_17 Q4	KS824	Sprinfield Road, Portavogie Storm Sewer Extension	00	KI538		07	24	
707	2016_17 Q4	KS851	Main Street, Cloughey, Pumping main, Foul and Storm Sewer E	01	KI538		07	24	
708	2016_17 Q4	KS854	Green Road, Conlig. Storm Sewer Extension.	00	KI538		07	24	
709	2016_17 Q4	KS876	Old Belfast Road, Bangor - Storm Sewer Extension	00	KI538		07	24	
710	2016_17 Q4	KS893	Magheraknock Road Ballynahinch Storm Sewer Extension	00	KI538		07	24	
711	2016_17 Q4	KS895	Ardnavalley Comber Sewer Pumping Main Extension	00	KI538		07	24	
712	2016_17 Q4	KS924	Annsfield Close, Killyleagh Storm Sewer Extension.	00	KI538		07	24	
713	2016_17 Q4	KS935	College Ave/ Shandon Drive, Bangor - Storm Sewer Requisition	00	KI538		07	24	
714	2016_17 Q4	KS947	Little Enler, Comber - Foul Sewer Extension	00	KI538		07	24	
715	2016_17 Q4	KS951	Chester Avenue Bangor Storm Sewer Extension	00	KI538		07	24	
716	2016_17 Q4	KS952	Quoile Crescent, Downpatrick, Foul and Storm Sewer Replacen	00	KI538		07	12	
717	2016_17 Q4	KS956	Millbrook, Ballynahinch, Storm Sewer Extension	00	KI538		07	24	
718	2016_17 Q4	KS960	Adj 189 Donaghadee Rd, Bangor - Foul Sewer	00	KI538		07	24	
719	2016_17 Q4	KT382	McKeown Street Lisburn Environmental Improvements	00	KI538		07	12	
720	2016_17 Q4	KT389	Magheralave Road Lisburn, Foul Sewer Extension	00	KI538		07	24	
721	2016_17 Q4	KT396	Blaris Road Lisburn Storm Sewer Extension	00	KI538		07	24	
722	2016_17 Q4	KT400	Willow Gardens Dunmurry Sewer Extension	00	KI538		07	24	
723	2016_17 Q4	KT407	Creevy Road, Lisburn Storm Sewer Extension	00	KI538		07	24	
724	2016_17 Q4	KT418	Dromore Road, Hillsborough Pumping Station	00	KI538		12	24	
725	2016_17 Q4	KT420	Knockbracken Road Newtownards Foul Sewer Ext	00	KI538		07	24	
726	2016_17 Q4	KV129	Old Newry Road, Banbridge Foul Sewer Ext	00	KI538		07	24	
727	2016_17 Q4	KV140	Rostrevor Road, Hilltown Storm Sewer Extension	00	KI538		07	24	
728	2016_17 Q4	KV151	Carrickdesland, Burren Foul Sewer Extension	00	KI538		07	24	
729	2016_17 Q4	KV152	Abbey Grammar School Storm Sewer Extension	00	KI538		07	24	
730	2016_17 Q4	KV156	Crieve Road, Newry Foul & Storm Sewer Extensions	00	KI538		07	24	
731	2016_17 Q4	KV166	Upper Dromore Road, Warrenpoint - Upgrade of Storm Sewer.	00	KI538		07	24	
732	2016_17 Q4	KV188	Villawood Dromore Sewage Scheme	00	KI538		07	24	
733	2016_17 Q4	KV197	Monteith Road Annaclone Foul & Storm Sewer Extensions	00	KI538		07	24	
734	2016_17 Q4	KV203	Scarva Street Loughbrickland Pumping Main	00	KI538		07	24	
735	2016_17 Q4	KV205	Courtney Hill, Newry, Storm Sewer Extension	00	KI538		07	24	
736	2016_17 Q4	KV208	Laurel Grove Newry Foul Sewer Extension	00	KI538		07	24	
737	2016_17 Q4	KV212	Percy Lodge, Dromore Storm Sewer	00	KI538		07	24	
738	2016_17 Q4	KV213	Calmor View, Lislea - Storm Sewer Extension.	00	KI538		07	24	
739	2016_17 Q4	KV214	Tollymore Rd, Newcastle Foul & Storm Sewer	00	KI538		07	24	
740	2016_17 Q4	KV215	26 Crossgar Road, Saintfield foul and storm sewer	00	KI538		07	24	
741	2016_17 Q4	KV216	St Josephs Primary, Newry, Storm Sewer.	00	KI538		07	24	
742	2016_17 Q4	KV218	Old Road Mayobridge Foul & Storm Sewer	00	KI538		07	24	
743	2016_17 Q4	KI539	PC15 Projects - Cluster of Septic Tanks causing Pollution	04			09	16	
744	2016_17 Q4	KI540	Wastewater treatment works belonging to bankrupt developers (	04			07	17	
745	2016_17 Q4	KI541	Sewerage Infrastructure Appraisal(s) for adoption from bankrupt	04			07	24	
746	2016_17 Q4	KI542	Small Rural WWTW Programme PC13	00			09	17	
747	2016_17 Q4	KI543	Pump Away Sewerage Removal Appraisal	00			05	02	
748	2016_17 Q4	KI544	Non UWWTW MCert Compliance	04			09	16	
749	2016_17 Q4	KI545	Sub Metering at selected WwTW	00			07	02	
750	2016_17 Q4	KI547	CSO Monitoring PC15	04			07	12	
751	2016_17 Q4	KI549	Non-Infrastructure Major Works	04			09	16	
752	2016_17 Q4	KI551	FTS and Minor Sewerage - Professional Services (PC15)	00			07	24	
753	2016_17 Q4	KV222	Caiseal Court, Ballyholland, Newry, Storm Sewer Extension.	00	KI538		07	24	
754	2016_17 Q4	KA272	Hillhead Road, Ballyclare Foul & Storm Sewer	00	KI551		07	24	
755	2016_17 Q4	KA277	The Old Station Dunadry Storm sewer	00	KI551		07	24	
756	2016_17 Q4	KB527	Tobermore Rd, Magherafelt Storm Sewer	00	KI551		07	24	
757	2016_17 Q4	KB528	Trostan Avenue, Ballymena, Foul Sewer Extension.	00	KI551		07	24	
758	2016_17 Q4	KB529	Castle Tower Special School, Trostan Avenue, Ballymena	00	KI551		07	24	
759	2016_17 Q4	KB530	Ballymena Showgrounds S.C. F&S sewer extension	00	KI551		07	24	
760	2016_17 Q4	KB531	Glenravel Rd Cargan Ballymena F&S sewer ext.	00	KI551		07	24	
761	2016_17 Q4	KB533	Oldtown Road, Bellaghy Foul Sewer	00	KI551		07	24	
762	2016_17 Q4	KC471	Laurel Hill, Coleraine, Storm Sewer Extension	00	KI551		07	24	
763	2016_17 Q4	KC478	The Cloisters, Bushmills	06	KI551		07	24	
764	2016_17 Q4	KF393	The Hollows, Lurgan - Storm Sewer Requistion	00	KI551		07	24	
765	2016_17 Q4	KF394	Colebrooke Rd Fivemiletown Storm Sewer	00	KI551		07	24	
766	2016_17 Q4	KF395	Favour Royal Road, Augher Foul Sewer	00	KI551		07	24	
767	2016_17 Q4	KF399	3A The Square, Moy Foul Sewer Ext.	00	KI551		07	24	
768	2016_17 Q4	KF401	Southern Regional College, Banbridge Storm Sewer	00	KI551		07	24	
769	2016_17 Q4	KG211	Edward St, Portadown Foul & Storm Sewer.	00	KI551		07	24	
770	2016_17 Q4	KG212	Armagh Rd, Portadown, Foul Sewer Requisition	00	KI551		07	24	
771	2016_17 Q4	KL534	Sion Mills Stable Block Foul Sewer	00	KI551		07	24	
772	2016_17 Q4	KL535	Northland Road, Londonderry, Storm and Foul Sewer Extensior	00	KI551		07	24	
773	2016_17 Q4	KL540	Foyle College, Limavady Road, Derry Storm Sewer	00	KI551		07	24	
774	2016_17 Q4	KL546	Dalys Brae, Drumahoe	06	KI551		07	24	
775	2016_17 Q4	KR555	Lapwing, Newtownards - Article 11 Enforcement Site	00	KI551		07	24	
776	2016_17 Q4	KR612	Olympia Leisure Centre Windsor Park Storm Sewer Requisition	00	KI551		07	24	
777	2016_17 Q4	KR617	Glen Road, Belfast - Storm Sewer Extension	00	KI551		07	24	
778	2016_17 Q4	KR621	College Avenue, Belfast, Storm Sewer Extension.	00	KI551		07	24	
779	2016_17 Q4	KR626	Ballyduff Road, Newtownabbey Storm Sewer Ext	00	KI551		07	24	
780	2016_17 Q4	KR638	Ravara Gardens, Bangor Foul Sewer	00	KI551		07	24	
781	2016_17 Q4	KR639	Prince Andrew Way, Carrickfergus Foul Sewer	00	KI551		07	24	
782	2016_17 Q4	KR643	Fashoda St, Belfast Storm Sewer Requisition.	00	KI551		07	24	
783	2016_17 Q4	KR649	Durham Street, Belfast Storm Sewer Extension.	00	KI551		07	24	
784	2016_17 Q4	KR655	2-4 Cheston Street, Carrickfergus storm sewer	00	KI551		07	24	
785	2016_17 Q4	KR661	Woodburn Primary School Carrickfergus	06	KI551		07	24	
786	2016_17 Q4	KS916	Flying Horse Rd, Downpatrick Sewer Extension	00	KI551		07	24	
787	2016_17 Q4	KS959	Saul Rd, Downpatrick Storm Sewer Extension	00	KI551		07	24	
788	2016_17 Q4	KS961	Cronstown Road, Newtownards, Storm Sewer Upgrade	00	KI551		07	24	
789	2016_17 Q4	KS963	Skipperstone Road, Bangor, Foul & Storm Sewer Requisition	00	KI551		07	24	
790	2016_17 Q4	KS969	Glenford Grove, Newtownards - Foul & Storm Sewer Extension	00	KI551		07	24	
791	2016_17 Q4	KS970	SEC-1833 Hunters Mill, Downpatrick Art11	00	KI551		07	24	
792	2016_17 Q4	KT424	Hillsborough Rd, Dromara Storm Sewer	00	KI551		07	24	
793	2016_17 Q4	KT426	Derriaghy Rd, Lisburn - Storm Sewer Extension	00	KI551		07	24	
794	2016_17 Q4	KT430	Hulls Lane Lisburn storm sewer extension	00	KI551		07	24	
795	2016_17 Q4	KT431	Strawberry Hill Ballynahinch Road Lisburn	00	KI551		07	24	
796	2016_17 Q4	KT433	125 Old Dundonald Road Dundonald , Foul & Storm sewer exte	06	KI551		07	24	
797	2016_17 Q4	KV227	Drumalane Rd, Newry Storm and Foul Sewers.	00	KI551		07	24	
798	2016_17 Q4	KI554	Energy Efficiency at WwTW's Screw Pumps	00			09	02	
799	2016_17 Q4	KI555	Stormwater Seperation Programme for PC15	04			07	12	
800	2016_17 Q4	KI556	Small Rural WWTW Programme - PC15(2015-2021)	04			09	17	
801	2016_17 Q4	KI557	PC15 Year 1 WWTW Base Maintenance – West Region	06			09	02	
802	2016_17 Q4	KI558	Engineering Specifications Standards.	04			15	20	
803	2016_17 Q4	KI559	PC15 Year 1 WWTW Base Maintenance – East Region	06			09	02	
804	2016_17 Q4	KI560	PC15 Year 1 WWTW Base Maintenance – South Region	06			09	02	
805	2016_17 Q4	KI561	PC15 Year 1 WWTW Base Maintenance – North Region	06			09	02	
806	2016_17 Q4	KI562	PC15 Year 1 WwPS Base Maintenance	06			12	02	
807	2016_17 Q4	KI563	Base Maintenance Associated to DG5 Investigations	00			07	12	
808	2016_17 Q4	KI564	Appraisal of DG5 At-Risk Register Locations (Mitigation Phase !	04			07	12	
809	2016_17 Q4	KI565	PC15 PSCEMD (Sewerage)	00			09	16	
810	2016_17 Q4	KI571	Asset Resilience Phase 3-Coastal Wastewater Treatment Work	06			09	02	
811	2016_17 Q4	KI573	DG5 Programme - Parent Code	06			07	12	
812	2016_17 Q4	KI574	PC15 Base Maintenance (Sewerage) Parent	06			09	02	
813	2016_17 Q4	KI575	PC15 (Sub Programme 12) Bathing Water and Shellfish Water (	06			07	12	
814	2016_17 Q4	KI576	PC15 (Sub Programme 16) Bathing Water and Shellfish Water (	06			09	16	
815	2016_17 Q4	KI577	PC15 UID Programme Parent	06			07	12	
816	2016_17 Q4	KI578	PC15 Appraisal of NIW infrastructure at Railways, DRD Road &	06			07	24	
817	2016_17 Q4	KI580	PC15 Base maintenance balancing line	06			0	99	
818	2016_17 Q4	KI581	PC15 FTS (Sewerage) Parent EP	06			07	24	
819	2016_17 Q4	KI582	PC15 Public Realm (Sewerage) Parent EP	06			07	24	
820	2016_17 Q4	KI583	PC15 Implementation of PC13 Odour & IPPC Strategy	06			10	16	
821	2016_17 Q4	KI584	PC15 Review of Sludge, IPPC and Odour Strategies	06			10	02	
822	2016_17 Q4	KI585	Wastewater Marine Investment Scoping Study	06			09	16	
823	2016_17 Q4	KI586	PC15 Year 2 WwPS Base Maintenance	06			12	02	
824	2016_17 Q4	KI589	CMP Project : Improving Capability in Capital Maintenance Plan	06			15	20	
825	2016_17 Q4	KI591	Pitch Fibre Sewer Replacement	06			07	12	
826	2016_17 Q4	KI592	Sampling and Analysis for WwTW PC15	00			14	20	
827	2016_17 Q4	KI593	Independent Review of Annsborough WwTW Pollution Incident	06			14	20	
828	2016_17 Q4	KI594	PC15 Year 3 WwPS Base Maintenance	06			12	02	
829	2016_17 Q4	KI595	Fire Safety Regulation Compliance	06			15	20	
830	2016_17 Q4	KI597	Marine Modelling, Bathing Waters (WwTW and Sewerage Syste	06			09	16	
831	2016_17 Q4	KI598	Marine Modelling, Shellfish Waters Excluding Belfast Lough (W	06			09	16	
832	2016_17 Q4	KI599	Marine Modelling, Shellfish Waters Including Belfast Lough (Ww	06			09	16	
833	2016_17 Q4	KI600	Network Modelling, Bathing Waters, WwTW	06			09	16	
834	2016_17 Q4	KI601	Network Modelling, Bathing Waters, Sewerage System	06			07	12	
835	2016_17 Q4	KI602	Network Modelling, Shellfish Waters Excluding Belfast Lough, W	06			09	16	
836	2016_17 Q4	KI603	Network Modelling, Shellfish Waters Excluding Belfast Lough, S	06			07	12	
837	2016_17 Q4	KI604	Network Modelling, Shellfish Waters Including Belfast Lough, S	06			07	12	
838	2016_17 Q4	KI605	Storm water separation pilot study phase 2	06			07	12	
839	2016_17 Q4	KL350	Benone Area Sewerage	01			09	16	
840	2016_17 Q4	KL386	Gortnahey WwTW	05			09	16	
841	2016_17 Q4	KL394	Drumsurn WwTW	06			09	16	
842	2016_17 Q4	KL473	M&E Capital Maintenance - Culmore WWTW	01			09	02	
843	2016_17 Q4	KL480	Faughan Crescent WWPS, Londonderry. Pumping station and F	01			12	12	
844	2016_17 Q4	KL481	Dungiven WWTW Inlet Sewer Hydraulic Assessment/Upgrade.	00			07	16	
845	2016_17 Q4	KL482	Tamnaherin WWTW Feasibility Study	04			09	16	
846	2016_17 Q4	KL496	Feeny WwTW Replacement of Secondary Treatment	05			09	16	
847	2016_17 Q4	KL503	Benone Upgrade of Vacuum Sewerage Network & Foul Vacuum	00			07	12	
848	2016_17 Q4	KL504	Londonderry DAP : Buncrana Road Work Package, Stage 2	02			07	12	
849	2016_17 Q4	KL506	Donnybrewer WWTW's Phase 2 Base Maintenance	00			09	02	
850	2016_17 Q4	KL511	Foyle Street, Londonderry Feasibility Study	00			07	12	
851	2016_17 Q4	KL512	Benone WWTW Modelling of Outfall Discharge	02			08	16	
852	2016_17 Q4	KL513	Roe Mill Road, Gorteen, Limavady Storm Sewer	00			07	24	
853	2016_17 Q4	KL515	Dernaflaw WWTWs Feasibility Study	04			09	16	
854	2016_17 Q4	KL521	Clooney WwPS Upgrade Magilligan	06			12	12	
855	2016_17 Q4	KL524	Bleachgreen WWPS, Londonderry, Upgrade/Replacement	04			12	12	
856	2016_17 Q4	KL527	Manorwood WWPS Replacement	06			07	12	
857	2016_17 Q4	KL530	Lough Foyle Sustainable Water Quality Improvement Project (L	03			09	16	
858	2016_17 Q4	KL533	Cottage Row , Eglinton, WWPS, Upgrade/Replace.	06			13	02	
859	2016_17 Q4	KL537	Glencaw Park, Derry, Flood Alleviation Feasibility Study	06			07	12	
860	2016_17 Q4	KL538	Sheelin Park Flood Alleviation	06			07	12	
861	2016_17 Q4	KL541	Lisnafin wwps	06			12	02	
862	2016_17 Q4	KL542	Ballymagorry Wwps	06			12	02	
863	2016_17 Q4	KL544	Carmoney Court, Eglinton Storm Sewer	00			07	24	
864	2016_17 Q4	KL545	9 Bayview Terrace, Londonderry	06			07	24	
865	2016_17 Q4	KL547	Belt Road, Altnagelvin, Foul Sewer replacement	06			07	24	
866	2016_17 Q4	KN155	Bready	01			09	24	
867	2016_17 Q4	KN596	BALLYMAGORRY WwTWs	06			14	16	
868	2016_17 Q4	KN599	Donaghmore WwTW Upgrade	06			14	16	
869	2016_17 Q4	KN622	Omagh WWTW - Nutrient Reduction	01			09	16	
870	2016_17 Q4	KN628	Carrickmore WWPS Upgrade Including Replacement of Pumpin	00			12	02	
871	2016_17 Q4	KN630	Drumquin WWTW Feasibility Study	02			09	16	
872	2016_17 Q4	KN647	Lough Macrory WWTW- Feasibility Study	06			14	16	
873	2016_17 Q4	KN653	Glencam road Omagh Storm Sewer Extension	00			07	24	
874	2016_17 Q4	KN655	Mountfield WWTW's Appraisal Study	04			09	16	
875	2016_17 Q4	KN656	Castle Archdale WWTW	04			09	16	
876	2016_17 Q4	KN657	Victoria Bridge WWTWs Feasibility Study	04			09	16	
877	2016_17 Q4	KN661	Beragh Storm Pumping Station Design	03			12	12	
878	2016_17 Q4	KN666	Berryhill Rd, Artigarvan, Sewer Remediation	06			07	12	
879	2016_17 Q4	KN667	Strathroy Link Road, Omagh	00			07	24	
880	2016_17 Q4	KN668	Killynure Wood, Enniskillen Storm sewer	00			07	24	
881	2016_17 Q4	KN669	Omagh IPS Foul & Storm	00			07	24	
882	2016_17 Q4	KO170	Lough Road, Lurgan	01			07	24	
883	2016_17 Q4	KP350	Ballinaleck - RBC Installations West & South	01			07	24	
884	2016_17 Q4	KP586	Clabby WwTWs	06			14	16	
885	2016_17 Q4	KP668	Lisnarrick WWTW Feasibility Study	06			09	16	
886	2016_17 Q4	KP677	Tamlaght Road WWPS, Omagh, Feasibility Study	00			12	12	
887	2016_17 Q4	KP680	Rossory WWPS Upgrade Feasibility Study	00			07	12	
888	2016_17 Q4	KP684	Dannys Mill Road Enniskillen Sewer Rehabilitation	00			07	12	
889	2016_17 Q4	KP687	Monea WWTWs Appraisal	04			09	16	
890	2016_17 Q4	KP689	Ballygawley WWTWs Feasibility Study	04			09	16	
891	2016_17 Q4	KP693	Tullynagarn WWPS Feasibility Study	00			12	12	
892	2016_17 Q4	KP695	Rossory WWPS, Pumping Main Extension and Replacement.	06			07	12	
893	2016_17 Q4	KP696	Enniskillen DAP Stage 4	06			07	12	
894	2016_17 Q4	KP697	PC15 Year 2 WWTW Base Maintenance – West Region	06			09	02	

Sort Ref	Baseline Milestone Dates							Baseline Service Cost Allocation			
	Baseline A1 Date	Baseline Project Approval Date	Baseline Start on Site Date	Baseline Beneficial Use Date	Baseline Regulatory sign off Date	Baseline Completion of Construction Date	Baseline End of Maintenance Period Date	Baseline Service Allocation Water Infrastructure	Baseline Service Allocation Water Non-Infrastructure	Baseline Service Allocation Sewerage Infrastructure	Baseline Service Allocation Sewerage Non-Infrastructure
1	11	12	13	14	15	16	17	18	19	20	21
672								0	0	0	0
674	18/04/2011	04/05/2011	01/02/2011	26/11/2010		26/11/2010	26/11/2011	0	0	0	0
675								0	0	0	0
676	12/03/2009	24/03/2009	21/05/2012	24/09/2012		24/09/2012	24/09/2013	0	0	0	0
677								0	0	0	0
678	05/08/2011	25/08/2011	05/05/2008	05/04/2012		05/04/2012	05/04/2013	0	0	0	0
679								0	0	0	0
680			19/07/2010	06/08/2010		06/08/2010	06/08/2011	0	0	0	0
681	07/07/2011	11/07/2011	04/04/2011	01/09/2011		01/09/2011	31/08/2012	0	0	0	0
682								0	0	0	0
683	02/04/2012	06/04/2012	09/09/2011	31/05/2012		31/05/2012	31/05/2013	0	0	0	0
684								0	0	0	0
685								0	0	0	0
705								0	0	0	0
706	20/07/2009	03/08/2009	21/07/2009	09/10/2009		09/10/2009	09/10/2010	0	0	0	0
707	11/09/2012	21/09/2012	06/09/2010	28/12/2012		28/12/2012	28/12/2013	0	0	0	0
708								0	0	0	0
709								0	0	0	0
710	04/01/2012	12/01/2012	07/05/2012	27/07/2012		27/07/2012	27/07/2013	0	0	0	0
711	20/07/2012	17/08/2012	15/10/2012	22/03/2013		22/03/2013	22/03/2014	0	0	0	0
720	16/07/2009	03/08/2009	24/08/2009	09/10/2009		09/10/2009	09/10/2010	0	0	0	0
721								0	0	0	0
722								0	0	0	0
723								0	0	0	0
726								0	0	0	0
727			13/12/2010	04/09/2009		04/09/2009	04/09/2010	0	0	0	0
728	02/07/2009	07/07/2009	31/08/2009	22/02/2010		22/02/2010	12/11/2010	0	0	0	0
729	21/04/2009	05/05/2009	06/07/2009	15/11/2010		15/11/2010	15/11/2011	0	0	0	0
730	16/08/2010	08/09/2010	31/10/2011	17/02/2012		17/02/2012	16/02/2013	0	0	0	0
731	13/06/2011	30/06/2011	22/08/2011	26/01/2012		26/01/2012	25/01/2013	0	0	0	0
732								0	0	0	0
733								0	0	0	0
746								0	0	0	100
748								0	0	0	100
749								0	0	0	100
750								0	0	0	100
786								0	0	0	0
800								0	0	0	100
809								0	0	0	100
811								0	0	100	0
812								0	0	0	100
813								0	0	100	0
814								0	0	0	100
815								0	0	52	48
816								0	0	100	0
817								16.8290195	26.9764154	12.8071115	43.3874537
818								0	0	100	0
819								0	0	100	0
820								0	0	0	100
821								0	0	0	100
839			12/12/2011	31/10/2013		31/12/2013	31/12/2014	0	0	18	82
840			01/04/2011	30/03/2014		30/06/2014	30/06/2016	0	0	0	100
841			01/07/2011	28/02/2015		31/03/2015	30/03/2016	0	0	0	100
842	21/06/2011	04/07/2011	03/10/2011	25/09/2012		25/09/2012	25/09/2013	0	0	0	0
843								0	0	0	0
844								0	0	0	0
845			30/01/2012	28/02/2013		28/02/2013	28/02/2014	0	0	0	0
846			03/12/2012	01/12/2013		31/03/2014	30/03/2015	0	0	0	100
847								0	0	78	22
848								0	0	46	54
849								0	0	0	0
851								0	0	0	100
867			01/04/2013	19/01/2015		28/03/2015	28/03/2016	0	0	0	100
868			01/04/2012	30/09/2014		31/12/2014	31/12/2015	0	0	0	100
869			25/07/2011	30/03/2012		30/03/2012	30/03/2013	0	0	0	0
870								0	0	0	0
871								0	0	0	0
872								0	0	0	0
875								0	0	0	100
883			05/02/2007	14/07/2008		14/07/2008	14/07/2009	0	0	0	0
884			30/06/2013	30/09/2015		31/12/2014	31/12/2015	0	0	0	100
885			14/03/2014	28/02/2015		30/04/2015	30/04/2016	0	0	0	100
886								0	0	0	0
887								0	0	0	0
888								0	0	0	0
893								0	0	78	22

Sort Ref	Baseline Expenditure Profile (£m 2012-13 prices)														Baseline Purpose Allocation			
	Baseline CAPEX 2010-11 £m	Baseline CAPEX 2011-12 £m	Baseline CAPEX 2012-13 £m	Baseline CAPEX 2013-14 £m	Baseline CAPEX 2014-15 £m	Baseline CAPEX 2015-16 £m	Baseline CAPEX 2016-17 £m	Baseline CAPEX 2017-18 £m	Baseline CAPEX 2018-19 £m	Baseline CAPEX 2019-20 £m	Baseline CAPEX 2020-21 £m	Baseline CAPEX 2021-22 £m	Baseline CAPEX 2022-23 £m	Baseline CAPEX 2023-24 £m	Baseline Purpose Allocation Quality	Baseline Purpose Allocation Base	Baseline Purpose Allocation ESL	Baseline Purpose Allocation Growth
1	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
672	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
674	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
675	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
676	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
677	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
678	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
679	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
680	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
681	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
682	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
683	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
684	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
685	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
705	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
706	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
707	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
708	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
709	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
710	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
711	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
720	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
721	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
723	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
727	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
729	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
730	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
731	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
732	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
733	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
746	0.000	0.000	0.000	4.942	1.837	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10	40	0	50
748	0.000	0.000	0.000	0.000	0.000	0.277	0.368	0.365	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0
749	0.000	0.000	0.000	0.000	0.000	0.229	0.144	0.225	0.000	0.000	0.000	0.000	0.000	0.000	0	0	100	0
750	0.000	0.000	0.000	0.000	0.000	0.873	0.867	0.862	0.857	0.852	0.847	0.000	0.000	0.000	100	0	0	0
786	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
800	0.000	0.000	0.000	0.000	0.000	1.895	1.884	1.872	1.861	1.850	1.839	0.000	0.000	0.000	10	41	0	49
809	0.000	0.000	0.000	0.000	0.000	0.185	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0
811	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.498	1.788	1.778	1.765	0.000	0.000	0.000	0	15	71	14
812	0.000	0.000	0.000	0.000	0.000	18.906	18.792	18.679	18.567	18.456	18.345	0.000	0.000	0.000	0	100	0	0
813	0.000	0.000	0.000	0.000	0.000	1.189	1.182	1.502	1.089	0.914	1.158	0.000	0.000	0.000	100	0	0	0
814	0.000	0.000	0.000	0.000	0.000	0.420	0.417	0.415	0.412	0.409	0.000	0.000	0.000	0.000	100	0	0	0
815	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.125	0.166	0.000	0.000	0.000	59	31	0	10
816	0.000	0.000	0.000	0.000	0.000	0.295	0.293	0.291	0.289	0.288	0.286	0.000	0.000	0.000	0	100	0	0
817	0.000	0.000	0.000	0.000	0.000	3.914	1.261	0.666	0.993	-1.912	-6.342	0.000	0.000	0.000	0	100	0	0
818	0.000	0.000	0.000	0.000	0.000	2.514	2.499	2.576	2.469	2.094	2.081	0.000	0.000	0.000	0	0	0	100
819	0.000	0.000	0.000	0.000	0.000	0.535	0.532	0.529	0.526	0.523	0.519	0.000	0.000	0.000	0	100	0	0
820	0.000	0.000	0.000	0.000	0.000	0.752	0.746	0.739	0.947	0.729	0.000	0.000	0.000	0.000	20	0	80	0
821	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.221	0.000	0.000	0.000	0.000	0	100	0	0
839	0.254	1.306	4.044	0.945	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	46	18	0	36
840	0.000	0.010	0.050	1.277	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	45	39	0	16
841	0.000	0.004	0.036	0.092	1.215	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15	67	0	18
842	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
843	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
844	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
845	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
846	0.000	0.000	0.038	1.385	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30	37	0	33
847	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.195	0.258	0.449	0.000	0.000	0.000	27	17	0	56
848	0.000	0.000	0.000	0.000	0.000	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	68	32	0	0
849	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
851	0.000	0.000	0.000	0.000	0.000	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0
867	0.000	0.019	0.006	1.097	0.726	0.151	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	32	24	0	44
868	0.000	0.016	0.013	1.790	1.328	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15	31	0	54
869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
870	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
871	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
872	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
875	0.000	0.000	0.000	0.000	0.000	0.122	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	84	0	16
883	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
884	0.000	0.012	0.023	0.747	0.762	0.421	2.189	0.000	0.000	0.000	0.000	0.000	0.000	0.000	43	27	0	30
885	0.000	0.012	0.019	0.055	1.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	40	40	0	20
886	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
887	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
888	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
893	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.526	0.697	1.213	0.000	0.000	0.000	27	17	0	56

Sort Ref	Current Actual or Projected Milestone Dates							Current Actual or Projected Service Cost Allocation			
	Current Actual or Projected A1 Date	Current Actual or Projected Project Approval Date	Current Actual or Projected Start on Site Date	Current Actual or Projected Beneficial Use Date	Current Actual or Projected Regulatory sign off Date	Current Actual or Projected Completion of Construction Date	Current Actual or Projected End of Maintenance Period Date	Current Actual or Projected Service Allocation Water Infrastructure	Current Actual or Projected Service Allocation Water Non-Infrastructure	Current Actual or Projected Service Allocation Sewerage Infrastructure	Current Actual or Projected Service Allocation Sewerage Non-Infrastructure
1	40	41	42	43	44	45	46	47	48	49	50
670	18/02/2016	18/02/2016	04/04/2016	17/06/2016		31/03/2016	26/08/2016	0	0	100	0
671	04/08/2015	04/08/2015						0	0	100	0
672	03/07/2015	03/07/2015						0	0	100	0
673	15/04/2014	12/05/2014	09/06/2014	20/02/2015		21/07/2014	18/11/2015	0	0	100	0
674	18/04/2011	04/05/2011						0	0	100	0
675	03/09/2014	17/09/2014						0	0	100	0
676	12/03/2009	24/03/2009	04/01/2011	24/09/2012		26/11/2013		0	0	100	0
677	16/12/2013	19/12/2013	02/06/2014	12/12/2014		28/11/2014	04/02/2015	0	0	100	0
678	23/05/2014	03/06/2014	28/07/2014	11/12/2015		30/01/2015	04/05/2016	0	0	100	0
679								0	0	100	0
680	04/05/2010	13/05/2010				23/04/2012		0	0	100	0
681	07/07/2011	11/07/2011						0	0	100	0
682	08/09/2014	17/09/2014	01/06/2015	11/12/2015		27/11/2015	25/01/2016	0	0	100	0
683	02/04/2012	06/04/2012						0	0	100	0
684								0	0	100	0
685	08/05/2013	22/05/2013	10/02/2014	29/04/2014		18/04/2014	20/08/2015	0	0	100	0
686	28/07/2013	06/08/2013						0	0	100	0
687	19/06/2015	19/06/2015	05/10/2015	18/11/2015		30/10/2015	15/12/2015	0	0	100	0
688	21/11/2014	21/11/2014	13/04/2015	12/06/2015			18/11/2015	0	0	100	0
689	04/04/2017	04/04/2017						0	0	100	0
690	01/09/2014	17/09/2014	01/12/2014	12/06/2015		31/03/2015	22/12/2015	0	0	100	0
691	11/08/2014	05/09/2014						0	0	100	0
692	06/10/2014	08/10/2014						0	0	100	0
693	09/09/2014	17/09/2014						0	0	100	0
694	12/01/2017	12/01/2017						0	0	100	0
695	19/04/2016	19/04/2016	04/07/2016	19/09/2016		26/08/2016	06/02/2017	0	0	100	0
696	04/08/2015	04/08/2015	04/07/2016	31/08/2016		26/08/2016		0	0	100	0
697	05/02/2015	16/02/2015	06/06/2016	23/06/2016		04/07/2016	12/12/2016	0	0	100	0
698	10/09/2014	17/09/2014	01/12/2014	12/12/2014		01/09/2014	20/04/2015	0	0	100	0
699	04/08/2015	04/08/2015	20/06/2016			11/11/2016		0	0	100	0
700	23/09/2015	23/09/2015	07/03/2016	19/04/2016		22/04/2016		0	0	100	0
701	09/02/2017	01/03/2017						0	0	100	0
702								0	0	100	0
703	24/07/2015	24/07/2015						0	0	100	0
704	04/08/2015	04/08/2015	18/07/2016	13/10/2016		26/08/2016		60	0	40	0
705								0	0	100	0
706	20/07/2009	03/08/2009						0	0	100	0
707	11/09/2012	21/09/2012	06/05/2013	30/07/2013		27/05/2013		0	0	100	0
708	06/07/2015	07/07/2015	17/10/2015			31/03/2016		0	0	99	1
709	18/12/2012	21/12/2012	13/04/2015	28/07/2015		29/06/2015	28/07/2015	0	0	100	0
710	04/01/2012	12/01/2012	07/05/2012			23/07/2012		0	0	100	0
711	20/07/2012	17/08/2012	01/04/2013	27/08/2014		27/08/2014	20/07/2015	0	0	94	6
712	29/07/2013	06/08/2013						0	0	100	0
713	27/08/2014	17/09/2014						0	0	100	0
714	04/08/2015	04/08/2015						0	0	100	0
715	27/10/2015	27/10/2015		29/01/2016			17/03/2016	0	0	100	0
716								0	0	100	0
717	22/12/2015	22/12/2015						0	0	100	0
718	29/04/2016	29/04/2016						0	0	100	0
719								0	0	100	0
720	16/07/2009	03/08/2009	07/03/2016	09/03/2017		31/03/2016		0	0	100	0
721								0	0	100	0
722	01/07/2016	01/07/2016						0	0	100	0
723	28/04/2014	02/05/2014						0	0	100	0
724	01/07/2015	10/07/2015						0	0	0	100
725	24/07/2015	24/07/2015		23/03/2017		16/01/2017		0	0	100	0
726	08/01/2016	08/01/2016	30/08/2016	16/09/2016		26/09/2016	05/12/2016	0	0	100	0
727	22/07/2008	01/08/2008						0	0	100	0
728	02/07/2009	07/07/2009	31/08/2009			04/07/2011	11/11/2010	0	0	100	0
729	21/04/2009	05/05/2009	06/07/2009	15/11/2010		31/08/2009		0	0	100	0
730	16/08/2010	08/09/2010	31/10/2011	03/08/2012		06/08/2012	21/12/2012	0	0	100	0
731	13/06/2011	30/06/2011	22/08/2011	14/10/2011		28/11/2011		0	0	100	0
732								0	0	100	0
733	20/01/2014	14/02/2014						0	0	100	0
734	24/07/2015	24/07/2015						0	0	100	0
735	27/11/2014	27/11/2014	30/06/2015	16/10/2015			21/12/2015	0	0	100	0
736	17/09/2014	25/09/2014						0	0	100	0
737	27/07/2015	27/07/2015						0	0	100	0
738	29/11/2014	29/11/2014						0	0	100	0
739	07/07/2015	07/07/2015	30/05/2016	24/06/2016		01/07/2016	08/12/2016	0	0	100	0
740	16/06/2015	16/06/2015	24/08/2015	12/01/2016		25/09/2015	25/01/2016	0	0	100	0
741	10/11/2015	10/11/2015						0	0	100	0
742	06/07/2015	06/07/2015						0	0	100	0
743								0	0	100	0
744								0	0	0	100
745								0	0	0	100
746	08/07/2013	19/07/2013	03/01/2014	31/03/2015		27/03/2015	07/09/2015	0	0	0	100
747								0	0	0	100
748								0	0	0	100
749								0	0	0	100
750	03/08/2016	04/08/2016						0	0	39	61
751								0	30	0	70
752	10/07/2014	17/07/2014						0	0	87	13
753	04/08/2015	04/08/2015						0	0	100	0
754	26/02/2016	26/02/2016						0	0	100	0
755								0	0	100	0
756	20/01/2016	20/01/2016						0	0	100	0
757	12/01/2017	12/01/2017	03/04/2017	07/04/2017				0	0	100	0
758	01/10/2016	01/10/2016				14/04/2017		0	0	100	0
759	17/11/2016	17/11/2016						0	0	100	0
760	28/11/2016	28/11/2016						0	0	100	0
761								0	0	100	0
762	01/07/2016	01/07/2016						0	0	100	0
763								0	0	100	0
764	10/12/2015	10/12/2015						0	0	100	0
765	01/07/2016	01/07/2016						0	0	100	0
766	09/12/2015	09/12/2015						0	0	100	0
767	20/07/2016	03/08/2016						0	0	100	0
768								0	0	100	0
769	14/10/2016	14/10/2016						0	0	100	0
770								0	0	100	0
771	26/11/2015	26/11/2015						0	0	100	0
772	01/07/2016	03/08/2016						0	0	100	0
773	15/11/2016	15/11/2016	23/01/2017					0	0	100	0
774								0	0	100	0
775	05/08/2014	17/09/2014	21/11/2016	27/01/2017		10/02/2017		0	0	100	0
776	23/06/2016	27/06/2016	19/09/2016					0	0	100	0
777	26/02/2016	02/03/2016						0	0	100	0
778								0	0	100	0
779	16/08/2016	16/08/2016						0	0	100	0
780	22/11/2016	22/11/2016						0	0	100	0
781	23/11/2016	23/11/2016						0	0	100	0
782	14/02/2017	14/02/2017						0	0	100	0
783								0	0	100	0
784								0	0	100	0
785								0	0	100	0
786	27/01/2014	10/02/2014	20/02/2017	24/02/2017		03/03/2017		0	0	100	0
787								0	0	100	0
788	07/04/2016	07/04/2016						0	0	100	0
789	08/03/2017	08/03/2017						0	0	100	0
790	07/12/2016	07/12/2016						0	0	100	0
791								0	0	100	0
792								0	0	100	0
793								0	0	100	0
794								0	0	100	0
795								0	0	100	0
796								0	0	100	0
797								0	0	100	0
798								0	0	0	100
799								0	0	100	0
800	04/02/2016	05/02/2016						0	0	0	100
801	06/01/2015	08/01/2015						0	0	0	100
802	29/07/2015	29/07/2015						10	25	25	40
803	06/01/2015	08/01/2015	06/04/2015			26/05/2017		0	0	0	100
804	06/01/2015	08/01/2015						0	0	0	100
805	06/01/2015	08/01/2015						0	0	0	100
806	09/03/2015	10/03/2015						0	0	0	100
807	27/11/2014	01/12/2014	02/03/2015	30/03/2016		30/09/2016		0	0	100	0
808								0	0	100	0
809								0	0	0	100
810								0	0	0	100
811	09/06/2016	10/06/2016						0	0	100	0
812								0	0	0	0
813								0	0	0	0
814								0	0	0	0
815								0	0	0	0
816								0	0	0	0
817								0	0	0	0
818								0	0	0	0
819								0	0	0	0
820	14/06/2016	16/06/2016						0	0	0	100
821								0	0	0	100
822								0	0	50	50
823	29/01/2016	02/02/2016						0	0	0	100
824								25	25	25	25
825								0	0	100	0
826								0	0	0	100
827								0	30	0	70
828	20/02/2017	21/02/2017						0	0	0	100
829								0	100	0	0
830								0	0	50	50
831								0	0	50	50
832								0	0	50	50
833								0	0	0	100
834								0	0	0	100
835								0	0	0	100
836								0	0	100	0
837								0	0	100	0
838								0	0	100	0
839	05/06/2009	11/06/2009	01/04/2012	16/09/2013		26/09/2014		0	0	18	82
840	30/07/2012	21/08/2012	12/08/2013	24/07/2014		27/11/2014	26/03/2015	0	0	0	100
841	30/07/2012	21/08/2012	03/02/2014	16/12/2014		16/02/2015		0	0	0	100
842	21/06/2011	04/07/2011	03/10/2011	24/09/2012		15/10/2012		0	0	0	100
843								0	0	0	100
844								0	0	40	60
845	30/11/2011	09/12/2011	30/01/2012	28/01/2013		21/10/2013	04/11/2014	0	0	0	100
846	30/07/2012	21/08/2012	03/12/2012	29/07/2014		12/03/2015	26/03/2015	0	0	0	100
847								0	0	51	49
848	06/12/2013	17/12/2013	04/09/2013	09/03/2017		31/08/2015		0	0	46	54
849	19/11/2012	21/11/2012	29/03/2013	28/03/2014		27/06/2014	03/11/2014	0	0	0	100
850								0	0	100	0
851								0	0	0	100
852								0	0	100	0
853								0	0	0	100
854	16/06/2016	17/06/2016	21/11/2016					0	0	0	100
855	11/12/2015	14/12/2015						0	0	0	100
856	12/02/2016	19/02/2016						0	0	0	100
857								0	0	50	50
858								0	0	0	100
859								0	0	100	0
860	01/09/2016	02/09/2016		23/03/2017				0	0	100	0
861								0	0	0	100
862								0	0	0	100
863								0	0	100	0
864								0	0	100	0
865								0	0	100	0
866			03/09/2013	21/09/2015				0	0	25	75
867	09/08/2013	19/08/2013		30/03/2015				0	0	0	100
868	25/07/2013	05/08/2013		01/10/2014				0	0	0	100
869	16/05/2011	18/05/2011	25/07/2011	25/02/2013		26/03/2012		0	0	0	100
870	12/03/2013	03/04/2013	02/09/2013	27/08/2014		16/12/2013		0	0	38	62
871								0	0	0	100
872								0	0	0	100
873								0	0	100	0
874	11/03/2016	15/03/2016						0	0	0	100
875	18/03/2014	25/03/2014	24/11/2014	21/03/2016		29/02/2016		0	0	0	100
876	02/08/2016	02/08/2016						0	0	0	100
877	09/10/2014	15/10/2014	03/11/2014	01/12/2015		17/04/2015	08/03/2016	0	0	0	100
878	26/01/2016	28/01/2016	04/07/2016					0	0	100	0
879								0	0	100	0
880	28/11/2016	15/12/2016						0	0	100	0
881								0	0	100	0
882			25/07/2006	05/09/2012		25/11/2008		0	0	100	0
883			05/02/2007	02/11/2012		16/03/2009		0	0	67	33
884	07/02/2017	14/02/2017		30/03/2018				0	0	21	79
885	18/01/2013	24/01/2013		01/12/2014				0	0	0	100
886								0	0	0	100
887								0	0	0	100
888	30/10/2012	05/11/2012	01/10/2012	30/01/2013		11/08/2014	02/11/2014	0	0	100	0
889								0	0	0	100
890								0	0	0	100
891	03/08/2016	04/08/2016	28/11/2016					0	0	0	100
892	07/05/2015	12/05/2015	29/06/2015	30/06/2016			15/08/2016	0	0	100	0
893								0	0	85	15
894	11/02/2016	19/02/2016						0	0	0	100

Sort Ref	Current Actual or Projected Capital Expenditure Profile (£m money of the day)														
	Current Actual or Projected CAPEX Year to date £m	Current Actual or Projected CAPEX 2010-11 £m	Current Actual or Projected CAPEX 2011-12 £m	Current Actual or Projected CAPEX 2012-13 £m	Current Actual or Projected CAPEX 2013-14 £m	Current Actual or Projected CAPEX 2014-15 £m	Current Actual or Projected CAPEX 2015-16 £m	Current Actual or Projected CAPEX 2016-17 £m	Current Actual or Projected CAPEX 2017-18 £m	Current Actual or Projected CAPEX 2018-19 £m	Current Actual or Projected CAPEX 2019-20 £m	Current Actual or Projected CAPEX 2020-21 £m	Current Actual or Projected CAPEX 2021-22 £m	Current Actual or Projected CAPEX 2022-23 £m	Current Actual or Projected CAPEX 2023-24 £m
1	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
670	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000
671	0.000	0.000	0.000	0.000	0.000	0.000	0.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
672	0.005	0.000	0.003	0.000	-0.001	0.003	0.036	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000
673	0.000	0.000	0.000	0.000	-0.002	0.068	-0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
674	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.000
675	-0.001	0.000	0.004	0.004	0.000	0.005	0.000	-0.001	0.000	0.032	0.000	0.000	0.000	0.000	0.000
676	0.000	0.003	0.014	0.610	0.071	0.007	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
677	0.000	0.001	-0.001	0.000	0.000	0.080	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
678	0.059	0.001	0.000	0.000	0.003	0.272	0.937	0.059	0.000	0.000	0.000	0.000	0.000	0.000	0.000
679	0.009	0.000	0.009	0.000	0.012	0.068	-0.004	0.009	0.506	0.000	0.000	0.000	0.000	0.000	0.000
680	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.000	0.000
681	0.002	0.000	0.001	0.000	0.000	0.000	0.000	0.002	0.011	0.007	0.000	0.000	0.000	0.000	0.000
682	0.000	0.000	0.002	0.000	0.000	0.000	0.064	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
683	0.000	0.000	0.099	0.109	-0.001	0.002	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
684	0.000	0.000	0.005	0.012	-0.001	0.000	-0.001	0.000	0.000	0.000	0.156	0.000	0.000	0.000	0.000
685	0.000	0.000	0.000	0.003	0.010	0.017	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
686	0.000	0.000	0.000	0.007	0.003	-0.003	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000
687	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
688	0.000	0.000	0.000	0.000	0.000	0.000	0.078	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
689	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.042	0.006	0.000	0.000	0.000	0.000	0.000
690	0.000	0.000	0.000	0.000	0.000	0.020	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
691	0.000	0.000	0.000	0.000	-0.005	0.099	-0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
692	0.105	0.000	0.000	0.000	-0.007	0.046	0.110	0.105	0.044	0.000	0.000	0.000	0.000	0.000	0.000
693	0.000	0.000	0.000	0.000	0.000	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
694	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000
695	0.125	0.000	0.000	0.000	0.000	0.000	0.000	0.125	0.000	0.000	0.000	0.000	0.000	0.000	0.000
696	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000
697	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000
698	0.000	0.000	0.000	0.000	0.000	0.030	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
699	0.157	0.000	0.000	0.000	0.000	0.000	0.000	0.157	0.000	0.000	0.000	0.000	0.000	0.000	0.000
700	0.014	0.000	0.000	0.000	0.000	0.000	0.043	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000
701	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.247	0.000	0.000	0.000	0.000	0.000	0.000
702	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.127	0.000	0.000	0.000	0.000	0.000
703	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.000	0.000	0.000	0.000	0.000
704	0.117	0.000	0.000	0.000	0.000	0.000	0.000	0.117	0.000	0.000	0.000	0.000	0.000	0.000	0.000
705	0.000	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.000	0.000
706	0.000	0.000	0.002	0.000	-0.003	0.000	0.000	0.000	0.000	0.043	0.000	0.000	0.000	0.000	0.000
707	0.001	0.003	0.002	0.001	0.078	0.017	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
708	0.534	0.006	0.000	0.000	0.014	0.000	0.720	0.534	0.000	0.000	0.000	0.000	0.000	0.000	0.000
709	0.000	0.001	0.001	0.002	-0.003	0.002	0.099	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
710	0.000	0.000	0.003	-0.002	0.000	0.000	0.001	0.000	0.000	0.055	0.000	0.000	0.000	0.000	0.000
711	0.006	0.000	0.005	0.008	0.239	0.077	-0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000
712	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.028	0.000	0.000	0.000	0.000	0.000
713	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.111	0.000	0.000	0.000	0.000	0.000
714	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.082	0.000	0.000	0.000	0.000	0.000
715	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
716	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.133	0.000	0.000	0.000	0.000	0.000	0.000
717	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000
718	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000
719	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.000	0.000	0.000
720	0.050	0.000	-0.001	0.000	0.000	0.000	0.077	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000
721	0.000	0.004	0.004	-0.004	0.002	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
722	0.012	0.002	0.000	0.005	-0.002	0.000	0.000	0.012	0.041	0.000	0.000	0.000	0.000	0.000	0.000
723	-0.001	0.000	0.004	0.000	0.000	0.012	0.004	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
724	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.099	0.000	0.000	0.000	0.000	0.000	0.000
725	0.062	0.000	0.000	0.000	0.000	0.000	0.000	0.062	0.000	0.000	0.000	0.000	0.000	0.000	0.000
726	0.027	0.001	0.000	0.000	0.000	0.000	0.000	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000
727	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.082	0.000	0.000	0.000	0.000
728	0.000	0.006	0.002	0.001	0.000	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
729	0.000	0.002	-0.002	0.007	0.000	0.000	-0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
730	0.000	0.001	0.092	0.027	-0.001	0.000	-0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
731	0.000	0.006	0.147	-0.001	0.000	0.000	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
732	0.000	0.000	0.001	0.006	-0.002	0.000	0.000	0.000	0.000	0.000	0.049	0.000	0.000	0.000	0.000
733	0.000	0.000	0.000	0.003	-0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.043	0.000	0.000	0.000
734	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.000	0.000	0.000
735	0.000	0.000	0.000	0.000	-0.011	0.000	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
736	0.001	0.000	0.000	0.000	0.000	0.000	0.031	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
737	-0.002	0.000	0.000	0.000	0.000	0.000	0.009	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
738	0.000	0.000	0.000	0.000	0.000	0.038	-0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
739	0.057	0.000	0.000	0.000	0.000	0.000	0.000	0.057	0.000	0.000	0.000	0.000	0.000	0.000	0.000
740	0.000	0.000	0.000	0.000	0.000	0.000	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
741	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.000	0.000	0.000	0.000	0.000
742	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
743	0.000	0.000	0.000	0.000	0.008	0.000	-0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
744	0.002	0.000	0.000	0.000	0.016	0.006	0.015	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
745	0.002	0.000	0.000	0.000	0.006	0.021	0.011	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
746	0.435	0.000	0.000	0.000	0.673	3.752	0.974	0.435	0.000	0.000	0.000	0.000	0.000	0.000	0.000
747	-0.022	0.000	0.000	0.000	0.030	0.018	0.000	-0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000
748	0.000	0.000	0.000	0.000	0.000	0.060	0.065	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
749	0.000	0.000	0.000	0.000	0.009	0.066	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
750	0.194	0.000	0.000	0.000	0.003	0.034	0.015	0.194	0.520	1.856	1.856	1.287	0.000	0.000	0.000
751	0.042	0.000	0.000	0.000	0.000	0.019	0.015	0.042	0.004	0.000	0.000	0.000	0.000	0.000	0.000
752	0.661	0.000	0.000	0.000	0.000	0.000	0.432	0.661	2.177	0.192	3.000	3.000	0.000	0.000	0.000
753	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
754	0.082	0.000	0.000	0.000	0.000	0.000	0.000	0.082	0.000	0.000	0.000	0.000	0.000	0.000	0.000
755	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.000	0.000	0.000	0.000
756	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000
757	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.001	0.000	0.000	0.000	0.000	0.000
758	0.065	0.000	0.000	0.000	0.000	0.000	0.000	0.065	0.000	0.000	0.000	0.000	0.000	0.000	0.000
759	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.062	0.000	0.000	0.000	0.000	0.000
760	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.000	0.000	0.000	0.000	0.000	0.000
761	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.056	0.000	0.000	0.000	0.000	0.000
762	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000
763	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.089	0.000	0.000	0.000	0.000	0.000
764	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000
765	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.029	0.000	0.000	0.000	0.000	0.000	0.000
766	0.003	0.000	0.000	0.000	0.000	0.000	0.022	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000
767	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000
768	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.000	0.000	0.000	0.000	0.000
769	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.059	0.000	0.000	0.000	0.000	0.000
770	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.000	0.000	0.000	0.000	0.000	0.000
771	-0.003	0.000	0.000	0.000	0.000	0.000	0.021	-0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000
772	0.065	0.000	0.000	0.000	0.000	0.000	0.000	0.065	0.024	0.000	0.000	0.000	0.000	0.000	0.000
773	0.120	0.000	0.000	0.000	0.000	0.000	0.000	0.120	0.020	0.000	0.000	0.000	0.000	0.000	0.000
774	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.034	0.000	0.000	0.000	0.000	0.000
775	0.104	0.000	0.000	0.000	0.005	0.000	0.000	0.104	0.000	0.000	0.000	0.000	0.000	0.000	0.000
776	0.544	0.000	0.000	0.000	0.000	0.000	0.000	0.544	0.281	0.000	0.000	0.000	0.000	0.000	0.000
777	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.072	0.000	0.000	0.000	0.000	0.000
778	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.159	0.000	0.000	0.000	0.000	0.000	0.000
779	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000
780	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.000	0.000	0.000	0.000	0.000
781	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.003	0.000	0.000	0.000	0.000	0.000	0.000
782	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000
783	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000
784	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.000	0.000	0.000	0.000	0.000
785	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.000	0.000	0.000	0.000	0.000
786	0.013	0.000	0.000	0.002	0.002	-0.001	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000
787	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.070	0.000	0.000	0.000	0.000	0.000
788	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000
789	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.029	0.000	0.000	0.000	0.000	0.000	0.000
790	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.000	0.000	0.000	0.000	0.000
791	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000
792	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000
793	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.000
794	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.000	0.000	0.000	0.000	0.000
795	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.078	0.000	0.000	0.000	0.000	0.000
796	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.068	0.000	0.000	0.000	0.000	0.000
797	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.132	0.000	0.000	0.000	0.000
798	0.020	0.000	0.000	0.000	0.000	0.020	0.010	0.020	0.008	0.000	0.000	0.000	0.000	0.000	0.000
799	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.667	1.667	1.666	0.000	0.000	0.000
800	2.025	0.000	0.000	0.000	0.000	0.030	0.126	2.025	2.379	2.243	2.233	2.587	0.000	0.000	0.000
801	0.163	0.000	0.000	0.000	0.000	0.000	3.703	0.163	0.000	0.000	0.000	0.000	0.000	0.000	0.000
802	0.206	0.000	0.000	0.000	0.000	0.025	0.160	0.206	0.000	0.000	0.000	0.000	0.000	0.000	0.000
803	2.673	0.000	0.000	0.000	0.000	0.040	4.991	2.673	0.000	0.000	0.000	0.000	0.000	0.000	0.000
804	0.091	0.000	0.000	0.000	0.000	0.040	4.864	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.000
805	0.219	0.000	0.000	0.000	0.000	0.249	4.819	0.219	0.000	0.000	0.000	0.000	0.000	0.000	0.000
806	1.108	0.000	0.000	0.000	0.000	0.033	3.988	1.108	0.000	0.000	0.000	0.000	0.000	0.000	0.000
807	0.114	0.000	0.000	0.000	0.000	0.069	0.772	0.114	0.000	0.000	0.000	0.000	0.000	0.000	0.000
808	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.020	0.000	0.000	0.000	0.000	0.000	0.000
809	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
810	0.012	0.000	0.000	0.000	0.000	0.000	0.002	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000
811	0.180	0.000	0.000	0.000	0.000	0.000	0.000	0.180	0.242	0.000	0.000	0.000	0.000	0.000	0.000
812	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
813	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
814	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
815	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
816	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
817	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
818	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
819	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
820	0.425	0.000	0.000	0.000	0.000	0.000	0.044	0.425	1.147	0.945	0.925	0.828	0.349	0.000	0.000
821	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
822	0.091	0.000	0.000	0.000	0.000	0.000	0.055	0.091	0.004	0.000	0.000	0.000	0.000	0.000	0.000
823	3.732	0.000	0.000	0.000	0.000	0.000	0.070	3.732	0.368	0.000	0.000	0.000	0.000	0.000	0.000
824	0.099	0.000	0.000	0.000	0.000	0.000	0.000	0.099	0.229	0.635	0.055	0.000	0.000	0.000	0.000
825	0.179	0.000	0.000	0.000	0.000	0.000	0.000	0.179	0.020	0.000	0.000	0.000	0.000	0.000	0.000
826	0.140	0.000	0.000	0.000	0.000	0.000	0.000	0.140	0.000	0.000	0.000	0.000	0.000	0.000	0.000
827	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.010	0.000	0.000	0.000	0.000	0.000	0.000
828	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.030	3.733	4.466	3.014	4.114	0.000	0.000	0.000
829	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000
830	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.273	0.273	0.193	0.114	0.000	0.000	0.000
831	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.447	0.447	0.317	0.185	0.000	0.000	0.000
832	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.331	0.331	0.234	0.138	0.000	0.000	0.000
833	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.048	0.034	0.021	0.000	0.000	0.000
834	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.435	0.435	0.308	0.181	0.000	0.000	0.000
835	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.056	0.056	0.040	0.024	0.000	0.000	0.000
836	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.507	0.508	0.360	0.212	0.000	0.000	0.000
837	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.088	1.087	0.770	0.453	0.000	0.000	0.000
838	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.200	0.100	1.000	0.000	0.000	0.000	0.000
839	0.000	0.254	1.337	4.558	1.356	0.027	0.124	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
840	-0.005	0.000	0.010	0.433	0.933	0.216	-0.013	-0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000
841	0.000	0.000	0.004	0.047	0.411	0.970	-0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
842	0.000	0.015	1.164	0.137	-0.001	0.001	-0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
843	0.004	0.000	0.006	0.009	0.007	-0.002	0.003	0.004	0.261	0.080	0.000	0.000	0.000	0.000	0.000
844	0.000	0.000	0.026	0.019	-0.005	0.000	0.000	0.000	0.155	0.095	0.000	0.000	0.000	0.000	0.000
845	0.007	0.000	0.376	1.025	-0.001	0.000	-0.043	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000
846	-0.059	0.000	0.000	0.581	0.499	0.403	-0.054	-0.059	0.000	0.000	0.000	0.000	0.000	0.000	0.000
847	0.106	0.000	0.000	0.000	0.000	0.000	0.016	0.106	0.033	0.090	0.100	1.532	0.000	0.000	0.000
848	0.778	0.000	0.000	0.029	0.078	0.230	0.669	0.778	0.000	0.000	0.000	0.000	0.000	0.000	0.000
849	0.000	0.000	0.000	0.134	0.536	0.148	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
850	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.135	0.015	0.000	0.000	0.000	0.000	0.000
851	0.000	0.000	0.000	0.000	0.000	0.030	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
852	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.110	0.000	0.000	0.000	0.000	0.000	0.000
853	0.012	0.000	0.000	0.000	0.025	0.012	0.009	0.012	0.039	0.000	0.000	0.625	0.025	0.042	0.000
854	0.261	0.000	0.000	0.000	0.000	0.010	0.000	0.261	0.084	0.030	0.000	0.000	0.000	0.000	0.000
855	0.151	0.000	0.000	0.000	0.000	0.010	0.003	0.151	0.102	0.000	0.000	0.000	0.000	0.000	0.000
856	0.255	0.000	0.000	0.000	0.000	0.007	0.018	0.255	0.004	0.000	0.000	0.000	0.000	0.000	0.000
857	0.030	0.000	0.000	0.000	0.000	0.000	0.085	0.030	0.040	2.300	2.200	2.200	1.825	0.000	0.000
858	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.438	0.227	0.060	0.000	0.000	0.000	0.000
859	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.101	0.000	0.000	0.000	0.000	0.000	0.000
860	0.072	0.000	0.000	0.000	0.000	0.000	0.000	0.072	0.001	0.000	0.000	0.000	0.000	0.000	0.000
861	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.005	0.003	0.200	0.000	0.000	0.000	0.000
862	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.014	0.018	0.000	0.400	0.000	0.000	0.000	0.000
863	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.000	0.000	0.000	0.000	0.000
864	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.029	0.000	0.000	0.000	0.000	0.000
865	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.308	0.000	0.000	0.000	0.000	0.000
866	-0.114	0.000	0.000	0.000	0.000	0.000	0.197	-0.114	0.000	0.000	0.000	0.000	0.000	0.000	0.000
867	0.117	0.000	0.019	0.005	0.092	2.023	0.246	0.117	0.000	0.000	0.000	0.000	0.000	0.000	0.000
868	0.029	0.000	0.016	0.014	0.089	1.714	0.651	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000
869	0.000	0.000	0.190	0.016	0.060	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
870	0.004	0.000	0.012	0.010	0.223	0.000	0.002	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000
871	0.020	0.000	0.020	0.005	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.000	0.500	0.000	0.000
872	0.020	0.000	0.000	0.012	0.016	-0.001	0.000	0.020	0.000	0.000	0.000	1.000	0.000	0.000	0.000
873	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.115	0.000	0.000	0.000	0.000	0.000
874	0.045	0.000	0.000	0.000	0.025	0.000	0.015	0.045	0.472	1.000	0.000	0.000	0.000	0.000	0.000
875	0.172	0.000	0.000	0.000	0.027	0.133	0.456	0.172	0.000	0.000	0.000	0.000	0.000	0.000	0.000
876	-0.003	0.000	0.000	0.000	0.023	0.000	0.002	-0.003	0.000	0.000	0.000	0.000	1.579	0.000	0.000
877	0.000	0.000	0.000	0.000	0.012	0.322	0.167	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
878	0.228	0.000	0.000	0.000	0.000	0.006	0.012	0.228	0.000	0.000	0.000	0.000	0.000	0.000	0.000
879	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.000	0.100	0.000	0.000	0.000	0.000	0.000
880	0.063	0.000	0.000	0.000	0.000	0.000	0.000	0.063	0.000	0.000	0.000	0.000	0.000	0.000	0.000
881	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.000	0.000	0.000
882	0.000	0.000	0.000	0.002	0.000	0.000	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
883	0.000	0.009	0.036	0.000	0.000	0.000	-0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
884	0.106	0.000	0.012	0.024	0.000	0.000	0.050	0.106	1.245	0.000	0.000	0.000	0.000	0.000	0.000
885	0.000	0.000	0.012	0.020	0.058	0.665	-0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
886	0.003	0.000	0.005	0.009	-0.003	0.008	0.003	0.003	0.048	0.253	0.500	0.000	0.000	0.000	0.000
887	0.000	0.000	0.000	0.025	0.016	0.119	-0.001	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
888	0.000	0.000	0.000	0.050	0.020	0.271	-0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
889	0.010	0.000	0.000	0.000	0.035	0.000	0.005	0.010	0.477	0.102	0.000	0.722	0.000	0.000	0.000
890	0.011	0.000	0.000	0.000	0.014	0.011	0.000	0.011	0.003	0.000	0.000	0.000	1.186	1.186	0.000
891	0.437	0.000	0.000	0.000	0.003	0.017	0.000	0.437	0.108	0.025	0.000	0.000	0.000	0.000	0.000
892	0.133	0.000	0.000	0.000	0.000	0.000	0.490	0.133	0.000	0.000	0.000	0.000	0.000	0.000	0.000
893	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
894	3.598	0.000	0.000	0.000	0.000	0.000	0.050	3.598	0.043	3.950	3.127	2.814	0.000	0.000	0.000

Sort Ref	Current Actual or Projected Purpose Allocation (%)				Current Actual or Projected IRE (%)		Nominated outputs (PC Period)
	Current Actual or Projected Purpose Allocation Quality	Current Actual or Projected Purpose Allocation Base	Current Actual or Projected Purpose Allocation ESL	Current Actual or Projected Purpose Allocation Growth	Current Actual or Projected IRE Allocation Water	Current Actual or Projected IRE Allocation Sewerage	Nominated Output
1	66	67	68	69	70	71	72
670	0	0	0	100	0	0	01
671	0	0	0	100	0	0	01
672	0	0	0	100	0	0	01
673	0	0	0	100	0	0	01
674	0	0	0	100	0	0	01
675	0	0	0	100	0	0	01
676	0	0	0	100	0	0	01
677	0	0	0	100	0	0	01
678	0	28	38	34	0	28	01
679	0	100	0	0	0	100	01
680	0	0	0	100	0	0	01
681	0	0	0	100	0	0	01
682	0	0	0	100	0	0	01
683	0	100	0	0	0	100	01
684	0	0	0	100	0	0	01
685	0	0	0	100	0	0	01
686	0	0	0	100	0	0	01
687	0	0	0	100	0	0	01
688	0	0	0	100	0	0	01
689	0	0	0	100	0	0	01
690	0	0	0	100	0	0	01
691	0	0	0	100	0	0	01
692	0	0	0	100	0	0	01
693	0	0	0	100	0	0	01
694	0	0	0	100	0	0	01
695	0	0	0	100	0	0	01
696	0	0	0	100	0	0	01
697	0	0	0	100	0	0	01
698	0	0	0	100	0	0	01
699	0	0	0	100	0	0	01
700	0	0	0	100	0	0	01
701	0	0	0	100	0	0	01
702	0	0	0	100	0	0	01
703	0	0	0	100	0	0	01
704	40	20	0	40	20	0	01
705	0	0	0	100	0	0	01
706	0	0	0	100	0	0	01
707	0	0	0	100	0	0	01
708	0	0	0	100	0	0	01
709	0	10	0	90	0	10	01
710	0	0	0	100	0	0	01
711	76	24	0	0	0	18	01
712	0	0	0	100	0	0	01
713	0	0	0	100	0	0	01
714	0	0	0	100	0	0	01
715	0	0	0	100	0	0	01
716	0	100	0	0	0	100	01
717	0	0	0	100	0	0	01
718	0	0	0	100	0	0	01
719	0	100	0	0	0	100	01
720	0	0	0	100	0	0	01
721	0	0	0	100	0	0	01
722	0	0	0	100	0	0	01
723	0	0	0	100	0	0	01
724	0	0	0	100	0	0	01
725	0	0	0	100	0	0	01
726	0	0	0	100	0	0	01
727	0	0	0	100	0	0	01
728	0	0	0	100	0	0	01
729	0	0	0	100	0	0	01
730	0	0	0	100	0	0	01
731	0	0	0	100	0	0	01
732	0	0	0	100	0	0	01
733	0	0	0	100	0	0	01
734	0	0	0	100	0	0	01
735	72	28	0	0	0	28	01
736	0	0	0	100	0	0	01
737	0	0	0	100	0	0	01
738	0	0	0	100	0	0	01
739	0	0	0	100	0	0	01
740	0	0	0	100	0	0	01
741	0	0	0	100	0	0	01
742	0	0	0	100	0	0	01
743	100	0	0	0	0	0	01
744	0	0	0	100	0	0	01
745	0	0	0	100	0	0	01
746	10	40	0	50	0	0	08
747	0	100	0	0	0	0	01
748	100	0	0	0	0	0	01
749	0	0	100	0	0	0	01
750	0	0	100	0	0	0	01
751	43	26	0	31	0	0	01
752	0	17	0	83	0	15	01
753	0	0	0	100	0	0	01
754	0	0	0	100	0	0	01
755	0	0	0	100	0	0	01
756	0	0	0	100	0	0	01
757	0	0	0	100	0	0	01
758	0	0	0	100	0	0	01
759	0	0	0	100	0	0	01
760	0	0	0	100	0	0	01
761	0	0	0	100	0	0	01
762	0	0	0	100	0	0	01
763	0	0	0	100	0	0	01
764	0	0	0	100	0	0	01
765	0	0	0	100	0	0	01
766	0	0	0	100	0	0	01
767	0	0	0	100	0	0	01
768	0	0	0	100	0	0	01
769	0	0	0	100	0	0	01
770	0	0	0	100	0	0	01
771	0	0	0	100	0	0	01
772	0	0	0	100	0	0	01
773	0	0	0	100	0	0	01
774	0	0	0	100	0	0	01
775	0	0	0	100	0	0	01
776	0	39	0	61	0	39	01
777	0	0	0	100	0	0	01
778	0	0	0	100	0	0	01
779	0	0	0	100	0	0	01
780	0	0	0	100	0	0	01
781	0	0	0	100	0	0	01
782	0	0	0	100	0	0	01
783	0	0	0	100	0	0	01
784	0	0	0	100	0	0	01
785	0	0	0	100	0	0	01
786	0	0	0	100	0	0	01
787	0	0	0	100	0	0	01
788	0	0	0	100	0	0	01
789	0	0	0	100	0	0	01
790	0	0	0	100	0	0	01
791	0	0	0	100	0	0	01
792	0	0	0	100	0	0	01
793	0	0	0	100	0	0	01
794	0	0	0	100	0	0	01
795	0	0	0	100	0	0	01
796	0	0	0	100	0	0	01
797	0	0	0	100	0	0	01
798	0	100	0	0	0	0	01
799	0	100	0	0	0	100	01
800	10	40	0	50	0	0	02
801	0	100	0	0	0	0	01
802	0	100	0	0	10	25	01
803	0	100	0	0	0	0	01
804	0	100	0	0	0	0	01
805	0	100	0	0	0	0	01
806	0	100	0	0	0	0	01
807	0	30	70	0	0	30	01
808	0	0	100	0	0	0	01
809	100	0	0	0	0	0	01
810	100	0	0	0	0	0	01
811	0	0	100	0	0	0	01
812	0	0	0	0	0	0	01
813	0	0	0	0	0	0	01
814	0	0	0	0	0	0	01
815	0	0	0	0	0	0	01
816	0	0	0	0	0	0	01
817	0	0	0	0	0	0	01
818	0	0	0	0	0	0	01
819	0	0	0	0	0	0	01
820	20	0	80	0	0	0	01
821	0	100	0	0	0	0	01
822	100	0	0	0	0	0	01
823	0	100	0	0	0	0	01
824	0	100	0	0	25	25	01
825	0	100	0	0	0	100	01
826	50	0	50	0	0	0	
827	0	100	0	0	0	0	01
828	0	100	0	0	0	0	01
829	0	100	0	0	0	0	01
830	100	0	0	0	0	0	01
831	100	0	0	0	0	0	01
832	100	0	0	0	0	0	01
833	100	0	0	0	0	0	01
834	100	0	0	0	0	0	01
835	100	0	0	0	0	0	01
836	100	0	0	0	0	0	01
837	100	0	0	0	0	0	01
838	0	100	0	0	0	100	01
839	46	18	0	36	0	3	08
840	45	39	0	16	0	0	08
841	15	67	0	18	0	0	08
842	0	100	0	0	0	0	01
843	0	60	0	40	0	0	03
844	0	100	0	0	0	40	01
845	31	32	0	37	0	0	
846	30	36	0	34	0	0	08
847	0	40	12	48	0	19	01
848	69	31	0	0	0	26	02
849	0	100	0	0	0	0	01
850	0	100	0	0	0	100	01
851	0	100	0	0	0	0	01
852	0	0	0	100	0	0	01
853	0	69	0	31	0	0	03
854	8	71	0	21	0	0	03
855	38	62	0	0	0	0	03
856	40	20	0	40	0	0	03
857	69	21	0	10	0	10	01
858	53	33	0	14	0	0	01
859	0	30	70	0	0	30	01
860	0	40	60	0	0	40	01
861	0	100	0	0	0	0	01
862	0	100	0	0	0	0	01
863	0	0	0	100	0	0	01
864	0	0	0	100	0	0	01
865	0	0	0	100	0	0	01
866	100	0	0	0	0	0	01
867	32	23	0	45	0	0	08
868	15	30	0	55	0	0	08
869	100	0	0	0	0	0	
870	43	14	0	43	0	8	01
871	23	57	0	20	0	0	03
872	24	52	0	24	0	0	03
873	0	0	0	100	0	0	01
874	37	46	0	17	0	0	03
875	0	83	0	17	0	0	02
876	44	26	0	30	0	0	03
877	0	0	100	0	0	0	01
878	0	8	86	6	0	8	01
879	0	100	0	0	0	100	01
880	0	0	0	100	0	0	01
881	0	0	0	100	0	0	01
882	90	0	0	10	0	0	01
883	3	20	0	77	0	15	01
884	45	15	0	40	0	0	02
885	30	30	0	40	0	0	08
886	40	36	12	12	0	0	03
887	40	36	12	12	0	0	03
888	0	100	0	0	0	100	01
889	0	35	0	65	0	0	03
890	44	26	0	30	0	0	03
891	38	17	0	45	0	0	03
892	0	100	0	0	0	100	01
893	0	35	51	14	0	30	01
894	0	100	0	0	0	0	01

Project Identification

Sort Ref	CIM Submission Reference	Project ID Reference	Project Name	PC Project Period	Parent Project ID	Substitute Project ID	Primary Asset Category	PC10 Programme	Regulatory Sign-Off Required
1	2	3	4	5	6	7	8	9	10
895	2016_17 Q4	KP698	PC15 Year 3 WwTW Capital Maintenance - West Region	06			09	02	
896	2016_17 Q4	KR310	Newtownbreda WwTW	01			09	15	
897	2016_17 Q4	KR313	Lisbarnet WwTW	01			09	15	
898	2016_17 Q4	KR323	Ligoniel Sewerage Scheme	00			07	12	
899	2016_17 Q4	KR409	Moneyreagh WwTW	05			07	16	
900	2016_17 Q4	KR442	Glenmachan Street WWPS Strategic Investigations	00			14	02	
901	2016_17 Q4	KR484	Safety improvements on out of service pumping stations in Belfa	00			12	02	
902	2016_17 Q4	KR494	East Belfast CSOs Screenings	01			07	12	
903	2016_17 Q4	KR500	Glenmachan Strategic Project Phase 1b Greystown Avenue & L	00			07	12	
904	2016_17 Q4	KR507	Commercial Way, Newtownabbey DG5 At-Risk-Register	00			07	12	
905	2016_17 Q4	KR512	Bank Square, Belfast, Environmental Improvements Scheme	00			07	12	
906	2016_17 Q4	KR519	Millbay WWPS Flow Survey	00			07	12	
907	2016_17 Q4	KR527	Greenisland WWTW Effluent Discharge Pipe - Feasibility Study	00			09	02	
908	2016_17 Q4	KR529	Park Parade, Ormeau Embankment, Belfast, Storm Sewer Exte	00			07	24	
909	2016_17 Q4	KR530	Belfast WWTW Base Maintenance - Phase 2	00			09	02	
910	2016_17 Q4	KR531	Park Road, Belfast Sewer Replacement	00			07	12	
911	2016_17 Q4	KR534	Carrowdore WWTW - Phase 2 Base Maintenance	00			09	02	
912	2016_17 Q4	KR535	New Holland WWTW's Phase 2 Base Maintenance	00			09	02	
913	2016_17 Q4	KR536	Newtownbreda WWTW's Phase 2 Base Maintenance	00			09	02	
914	2016_17 Q4	KR538	Dunmurry WWTW's Phase 2 Base Maintenance	00			09	02	
915	2016_17 Q4	KR539	Moneyreagh WWTWs Phase 2 Base Maintenance	00			09	02	
916	2016_17 Q4	KR540	Mill Rd, Newtownabbey Foul and Storm Sewer	00			07	24	
917	2016_17 Q4	KR542	Cyprus Avenue, Belfast Sewer Rehabilitation	00			07	12	
918	2016_17 Q4	KR543	Ebor Street, Storm Sewer	00			07	24	
919	2016_17 Q4	KR546	Hallidays Road, Belfast , Storm Sewer	00			07	24	
920	2016_17 Q4	KR549	Nettlehill Road, Lisburn - Storm Sewer	00			07	24	
921	2016_17 Q4	KR556	Compliance with The Surface Waters (Shellfish)(Classification)(	02			09	16	
922	2016_17 Q4	KR560	Orchardville and Finaghy Road North, Belfast Sewer Rehabilitat	00			07	12	
923	2016_17 Q4	KR561	Orchardville WWPS Appraisal of Pumped Overflow and Inlet Se	00			07	12	
924	2016_17 Q4	KR562	Sicily Park Belfast Sewer Diversions from Storm Culvert	00			07	12	
925	2016_17 Q4	KR568	Loughries WWTWs Appraisal	04			09	16	
926	2016_17 Q4	KR570	Sydenham WWPS Appraisal	03			13	02	
927	2016_17 Q4	KR576	Belfast WWTW PLC Upgrade	03			09	02	
928	2016_17 Q4	KR579	22 Upper Lisburn Rd, Belfast Storm Sewer	00			07	24	
929	2016_17 Q4	KR581	163-165 Glen Road Belfast Storm Sewer Extension	00			07	24	
930	2016_17 Q4	KR586	Maryville Avenue, Belfast, DG5 Appraisal	06			07	12	
931	2016_17 Q4	KR588	Ravenhill Avenue, Belfast, Sewer Upgrades	06			07	12	
932	2016_17 Q4	KR594	Springwell Park, Groomsport	00			07	12	
933	2016_17 Q4	KR599	Belfast WwTW Appraisal Study	06			09	16	
934	2016_17 Q4	KR600	North Queen Street, Storm Sewer Extension	00			07	24	
935	2016_17 Q4	KR605	Upper Newtownards Road, Belfast, Sewer Upgrade to Address	04			07	12	
936	2016_17 Q4	KR606	Eastleigh Dale/Pasadena Gardens, Belfast, Sewer Upgrade for	06			07	12	
937	2016_17 Q4	KR608	Ravenhill Road, Belfast, Trunk Sewer Investigations and Emerg	05			07	12	
938	2016_17 Q4	KR610	432 Crumlin Rd, Belfast - Storm Sewer Ext	00			07	24	
939	2016_17 Q4	KR614	Greencastle WwPS - Pumping Main Breach	03			07	24	
940	2016_17 Q4	KR618	152 - 154 Larne Rd, Carrickfergus	00			07	24	
941	2016_17 Q4	KR619	Sydenham WWPS Screen appraisal	06			13	02	
942	2016_17 Q4	KR622	McClintock Street, Belfast, Storm Sewer Extension	00			07	24	
943	2016_17 Q4	KR623	Queens Bridge, Belfast, Siphons Upgrade.	06			07	12	
944	2016_17 Q4	KR624	East Befast, Back Drainage Study.	06			07	12	
945	2016_17 Q4	KR625	Wastewater Heritage and Education Centre	06			14	20	
946	2016_17 Q4	KR627	PC15 Year 2 WWTW Base Maintenance – East Region	06			09	02	
947	2016_17 Q4	KR628	642 Saintfield Rd, Carryduff Storm Sewer Extension	00			07	24	
948	2016_17 Q4	KR629	Milebush Park, Carrickfergus Flood Alleviation	06			07	12	
949	2016_17 Q4	KR631	Crawfordsburn Way, Newtownards - Storm Sewer Extension	00			07	24	
950	2016_17 Q4	KR632	Sydenham Park Avenue WWPS Replacement	06			13	12	
951	2016_17 Q4	KR633	East Belfast Integrated Catchment Modelling	06			14	20	
952	2016_17 Q4	KR634	Harberton Park / Kings Hall Storm Sewer Extension	00			07	24	
953	2016_17 Q4	KR635	Upper Hightown Road Newtownabbey Storm Sewer	00			07	24	
954	2016_17 Q4	KR640	Holywood Sewer Network Improvements- Phase 2	06			07	12	
955	2016_17 Q4	KR641	336-344 Oldpark Road, Belfast F&S sewer req.	00			07	24	
956	2016_17 Q4	KR642	Laganbank Sewer Investigation, Belfast	00			07	12	
957	2016_17 Q4	KR644	2-24 Shore Road Greenisland Storm Sewer	00			07	24	
958	2016_17 Q4	KR645	Sludge Disposal Strategy: Market Appraisal	06			11	12	
959	2016_17 Q4	KR646	761 Upper N'ards Road, Belfast Storm Sewer	00			07	24	
960	2016_17 Q4	KR647	Ballyrobert Bangor Wwps Upgrade	06			12	02	
961	2016_17 Q4	KR650	Brookhall Foul Sewer Extension	00			07	24	
962	2016_17 Q4	KR651	Castle St, Comber - foul and storm sewer requisition	00			07	24	
963	2016_17 Q4	KR652	Templepatrick Road, Ballyclare Foul Sewer	00			07	24	
964	2016_17 Q4	KR653	Upper Lisburn Rd, Belfast Storm Sewer Extension	00			07	24	
965	2016_17 Q4	KR654	Brookmount Street, Belfast - Storm Sewer Extension	00			07	24	
966	2016_17 Q4	KR656	Holywood A and B wwps	06			12	02	
967	2016_17 Q4	KR657	Glenbryn Park, Belfast - Storm Sewer	00			07	24	
968	2016_17 Q4	KR658	Fitzroy Ave, Belfast Storm Sewer Extension	00			07	24	
969	2016_17 Q4	KR659	Glenview Rd, Holywood - Foul Sewer Extension	06			07	24	
970	2016_17 Q4	KR660	113 Bangor Rd, Newtownards Storm Sewer Requisition	00			07	24	
971	2016_17 Q4	KR662	34 and 41 Belfast Road, Antrim Storm sewer	00			07	24	
972	2016_17 Q4	KR666	St Bernadette P/School Belfast Storm Sewer	00			07	24	
973	2016_17 Q4	KR667	Cooks Cove Wwps	06			12	12	
974	2016_17 Q4	KR668	Structural survey of Belfast Stormwater Tunnel	06			07	20	
975	2016_17 Q4	KS111	Ards South, Portavogie, Ballyhalbert, Cloughey,Kirkistown	05			07	16	
976	2016_17 Q4	KV229	Ben Crom Place, Kilkeel - Storm Sewer Extension	00	KI551		07	24	
977	2016_17 Q4	KR389	Ballyhalbert WwTW Interim Solution	01	KS111		09	15	
978	2016_17 Q4	KR391	Portavogie WwTW Interim Solution	01	KS111		07	15	
979	2016_17 Q4	KS113	Ards North, Carrowdore, Ballywalter, Ballyhaskin	06			09	16	
980	2016_17 Q4	KS887	Ballycranbeg WWTW	02	KS111		09	16	
981	2016_17 Q4	KR388	Ballywalter WwTW Interim Solution	01	KS113		09	15	
982	2016_17 Q4	KS224	Downpatrick WwTW	01			09	15	
983	2016_17 Q4	KS225	Ardglass WwTW	01			09	15	
984	2016_17 Q4	KS235	Ballygowan WwTW	03			09	16	
985	2016_17 Q4	KS326	Commons Road, Ballykinlar Storm Sewer	00			07	24	
986	2016_17 Q4	KS328	Delinvilla Lane Dundrum Storm Sewer	00			07	24	
987	2016_17 Q4	KS389	Ballymartin & Blackrock WwTWs	05			09	16	
988	2016_17 Q4	KS848	Newcastle Waste Water Treatment Works	01			09	16	
989	2016_17 Q4	KS873	Bangor DAP Work Package 2: Rathmore Stream UIDs	01			07	12	
990	2016_17 Q4	KS874	Bangor DAP Works Package 3 - Belfast Lough UIDs	01			07	12	
991	2016_17 Q4	KS875	Bangor DAP Works Package 6: Lukes Point WWPS UID	01			07	12	
992	2016_17 Q4	KS877	Bangor DAP Works Package 5 - Clandeboye Stream UIDs	01			07	12	
993	2016_17 Q4	KS879	Bangor DAP Work Package 4: Bangor Marina UIDs	01			07	12	
994	2016_17 Q4	KS880	Kirkistown North WwPS Refurbishment	01			12	12	
995	2016_17 Q4	KS881	Cloughey South WwPS Refurbishment	01			12	02	
996	2016_17 Q4	KS900	WwPS Upgrades at Groomsport, Killinchy & Craigavad	00			12	12	
997	2016_17 Q4	KS902	Dundrum DAP, UIDs Upgrades.	02			07	12	
998	2016_17 Q4	KS903	Annalong DAP UIDs, Upgrades.	02			07	12	
999	2016_17 Q4	KS905	Kilmore & Annacloy WwTW	06			14	16	
1000	2016_17 Q4	KS908	Killinchy WWTW - Feasibility Study	06			14	16	
1001	2016_17 Q4	KS909	DG5 157a & 155 Groomsport Road Bangor Additional Studies	00			07	12	
1002	2016_17 Q4	KS912	Greyabbey WWPS Catchment Flow and Loading Survey.	01			07	12	
1003	2016_17 Q4	KS913	Upper Crescent WWPS Upgrade	00			13	12	
1004	2016_17 Q4	KS914	Scrabo Road, Newtownards, WWPS Upgrade	02			12	12	
1005	2016_17 Q4	KS918	Greyabbey WWTW	00			09	16	
1006	2016_17 Q4	KS921	Kircubbin WWTW Phase 2 Base Maintenance	00			09	02	
1007	2016_17 Q4	KS926	Primacy Road, Bangor, Foul and Storm Sewer Extensions	00			07	24	
1008	2016_17 Q4	KS930	Millisle DAP Stage 2, Phase 2	02			07	12	
1009	2016_17 Q4	KS933	Kircubbin DAP CSO Upgrade	04			07	12	
1010	2016_17 Q4	KS937	Annsborough WWPS Upgrade	06			07	12	
1011	2016_17 Q4	KS938	Grange Road Kilkeel Out of Sewer Flooding Feasibility Study	03			07	12	
1012	2016_17 Q4	KS944	Glenard Road Newtownards Foul Sewer Extension	00			07	24	
1013	2016_17 Q4	KS946	Mourneview, Newcastle, Flood Alleviation	04			07	12	
1014	2016_17 Q4	KS955	Green Road, Ardglass, Foul and Storm Sewer.	00			07	24	
1015	2016_17 Q4	KS958	Bangor DAP Works Package 5 Clandeboye Stream UIDs Phase	03			07	12	
1016	2016_17 Q4	KS962	Dundrum WwTW	06			09	16	
1017	2016_17 Q4	KS964	106 Greencastle Road, Kilkeel, Storm Sewer Extension	00			07	24	
1018	2016_17 Q4	KS965	Killyleagh Rd, Crossgar Foul Sewer Extension	00			07	24	
1019	2016_17 Q4	KS967	41 High Bangor Rd, Donaghadee - Foul Sewer Requisition.	00			07	24	
1020	2016_17 Q4	KS968	Saintfield Road, Balloo Storm Sewer	00			07	24	
1021	2016_17 Q4	KS971	Cotton Wwps	06			12	02	
1022	2016_17 Q4	KS972	Ballystockart, Comber - Network Investigation	06			07	20	
1023	2016_17 Q4	KS973	North Rd, Newtownards Storm Sewer Extension	06			07	24	
1024	2016_17 Q4	KS974	PC15 Year 3 WwTW Capital Maintenance - East Region	06			09	02	
1025	2016_17 Q4	KT114	Hillsborough WwTW	01			12	16	
1026	2016_17 Q4	KT126	Stoneyford WwTW	06			09	16	
1027	2016_17 Q4	KT391	Lisburn DAP Stage 1	00			07	12	
1028	2016_17 Q4	KT398	Mill Street/Bridge Street ,Hilden ,Lisburn, Storm Sewer Extensio	00			07	24	
1029	2016_17 Q4	KT402	Dunmurry WWTW Sludge Facility	05			10	16	
1030	2016_17 Q4	KT413	Orchard Annahilt WWPS - Feasibility Study	00			12	02	
1031	2016_17 Q4	KT416	Annahilt WWTW Phase 2 Base Maintenance	00			09	02	
1032	2016_17 Q4	KT422	Longstone St, Lisburn Storm Sewer Extension	00			07	24	
1033	2016_17 Q4	KT423	Mossvale Rd, Dromore Foul Sewer Requisition	00			07	24	
1034	2016_17 Q4	KT425	St Jame's Park, Hillsborough Storm Sewer	00			07	24	
1035	2016_17 Q4	KT427	Lurgan Road, Moira - Storm Sewer Extension	00			07	24	
1036	2016_17 Q4	KT428	Ballymacash Road, Lisburn, Flood Alleviation	06			07	12	
1037	2016_17 Q4	KT429	Windmill Lane, Ballynahinch Storm Sewer Requisition	00			07	24	
1038	2016_17 Q4	KT432	52-58 Main Street Glenavy, storm sewer extension.	06			07	24	
1039	2016_17 Q4	KV013	Rostrevor Sewerage Scheme	00			12	12	
1040	2016_17 Q4	KV064	Lurganare WwTW	01			07	15	
1041	2016_17 Q4	KV079	McShanes Road, Bessbrook Foul Sewer Extension	00			07	24	
1042	2016_17 Q4	KV122	High Street, Gilford Sewer Replacement	00			07	12	
1043	2016_17 Q4	KV178	Cranfield WwTW Feasibility Study	03			14	16	
1044	2016_17 Q4	KV182	Carran Hill WTW & Creamery Road Sewer Extension	00			07	24	
1045	2016_17 Q4	KV186	Kilkeel WWTW Feasibility Study	06			14	16	
1046	2016_17 Q4	KV194	Banbridge WWTW's Phase 2 Base Maintenance	00			09	02	
1047	2016_17 Q4	KV196	Hilltown WWTW Phase 2 Base Maintenance	00			09	02	
1048	2016_17 Q4	KV200	Drumsesk Wastewater Header Tank - Feasibility Study	00			07	12	
1049	2016_17 Q4	KV201	Moneyslane WWTWs Appraisal	04			09	16	
1050	2016_17 Q4	KV202	Meigh WWTW Feasibility Study	04			09	16	
1051	2016_17 Q4	KV207	Whyte Acres - Banbridge	00			07	12	
1052	2016_17 Q4	KV217	Carlingford Lough Sustainable Water Quality Improvement Proj	06			09	16	
1053	2016_17 Q4	KV219	Newpoint WWPS Screen upgrade	04			13	12	
1054	2016_17 Q4	KV220	Warrenpoint Flooding Investigations	00			07	12	
1055	2016_17 Q4	KV223	Carnagat Road Newry Foul & Storm Sewer Requisition	00			07	24	
1056	2016_17 Q4	KV224	The Slopes Rathfriland Wwps appraisal	06			12	12	
1057	2016_17 Q4	KV225	Newpoint TPS Fire - Odour Control	00			13	02	
1058	2016_17 Q4	KV226	Dromore Street, Banbridge Foul Sewer Extension	00			07	24	
1059	2016_17 Q4	KV228	Chapel View, Carran Rd SS Crossmaglen	00			07	24	
1060	2016_17 Q4	KV230	Cranfield Catchment , Kilkeel Storm Seperation	00			07	12	
1061	2016_17 Q4	KV231	75 Kilkeel Rd, Annalong Storm Sewer Extension	00			07	24	
1062	2016_17 Q4	KV232	115-117 Main st, Newcastle Storm Sewer Extension	00			07	24	
1063	2016_17 Q4	KZ002	Capital Works Programme Procurement	01			14	02	
1064	2016_17 Q4	KZ007	Storm Water Separation	06			07	12	
1065	2016_17 Q4	KZ008	Wastewater Networks Modelling/Surveys	06			14	20	
1066	2016_17 Q4	AM086	CAR FME Server	00			15	20	
1067	2016_17 Q4	AM089	Positional Improvement (OSNI)	04			15	20	
1068	2016_17 Q4	AM090	Cost Base and Capex Comparative Efficiency	03			15	20	
1069	2016_17 Q4	AM093	PC15 M&G Parent	06			15	20	
1070	2016_17 Q4	AM094	Corporate GIS Project	06			15	20	
1071	2016_17 Q4	AM096	Westland - Main Building Kitchen / Coffee Lounge Extension				15	20	
1072	2016_17 Q4	AP036	CCTV Surveys Asset Performance 2011 - 2012	00			07	02	
1073	2016_17 Q4	AP055	Condition Assessment	05			06	20	
1074	2016_17 Q4	AP059	Netownbreda MBV	02			14	20	
1075	2016_17 Q4	AP066	Carrick MBV	03			14	20	
1076	2016_17 Q4	AP084	Provision of Interim Bridging Services (Previously KI522)	00			06	20	
1077	2016_17 Q4	AP089	Network Model Updates	03			06	20	
1078	2016_17 Q4	AP093	Sewer network models- Cushendall,Ballykelly, Dungiven	03			14	20	
1079	2016_17 Q4	AP094	Service Reservoir Condition Assessments Pilot Study	05			06	20	
1080	2016_17 Q4	AP096	Base Maintenance Prioritisation	03			15	20	
1081	2016_17 Q4	AP100	PC13 Network Modelling Support Services	03			06	20	
1082	2016_17 Q4	AP101	Storm Analysis Reports	03			14	20	
1083	2016_17 Q4	AP102	Provision of PPRA Reports	03			03	20	
1084	2016_17 Q4	AP103	Investigation of Polluted Stormwater Outfalls	03			07	20	
1085	2016_17 Q4	AP105	Larne MBV	03			14	20	
1086	2016_17 Q4	AP106	Drainage Area Study Specification revision	03			14	20	
1087	2016_17 Q4	AP107	Sewer Network Modelling Support	03			14	20	
1088	2016_17 Q4	AP111	Larne Network Investigation	03			14	20	
1089	2016_17 Q4	AP114	Development of PC15 Lead Pipe Replacement Programme	04			06	23	
1090	2016_17 Q4	AP120	Asset Performance CCTV surveys - 14/15	03			14	20	
1091	2016_17 Q4	AP122	Investigation of polluted stormwater outfalls - phase 1	05			07	12	
1092	2016_17 Q4	AP128	Trunk Main Condition Assessment 14/15	03			03	20	
1093	2016_17 Q4	AP130	Hydraulic Review + Verification of Water Network Schemes	03			03	20	
1094	2016_17 Q4	AP142	Provision of Pressure Logging Equipment	06			06	20	
1095	2016_17 Q4	AP143	SR and CWB Risk and Consequence Model Update	06			06	20	
1096	2016_17 Q4	AP150	Provision of Flow Monitoring Equipment	00			14	20	
1097	2016_17 Q4	BC006	Meter reconciliation phase 2	01			06	20	
1098	2016_17 Q4	BC007	Debt and Collections phase 2	01			06	20	
1099	2016_17 Q4	BC009	CS Data Quality Programme	05			15	20	
1100	2016_17 Q4	BC010	Digital Customer Phase 1	03			15	20	
1101	2016_17 Q4	BC013	CBC Implementation	04			15	20	
1102	2016_17 Q4	BC014	Meter to Bill Improvement	06			06	20	
1103	2016_17 Q4	BE006	Vehicle GPS	01			15	20	
1104	2016_17 Q4	BE012	Monthly Pay and Oracle Enhancements	06			15	20	
1105	2016_17 Q4	BE016	Plant Purchasing Project (Short Term Strategy)	06			06	20	
1106	2016_17 Q4	BE017	Energy M&G	06			09	02	
1107	2016_17 Q4	BI121	Contractor Ellipse Interface	02			14	20	
1108	2016_17 Q4	BI139	SCaMP (Sustainable Catchment Management Plan) Mournes W	00			01	20	
1109	2016_17 Q4	BI152	Nisrans automated interface	01			15	20	
1110	2016_17 Q4	BI156	Optimal Control & management System site surveys	00			14	20	
1111	2016_17 Q4	BI226	Sustainable Local Power	01			06	20	
1112	2016_17 Q4	BI231	AGGREGATED GENERATION	01			15	20	
1113	2016_17 Q4	BI232	Installation of Sub Electricity Meters - Pilot Study @ Killyhevlin W	01			06	20	
1114	2016_17 Q4	BI240	Development of ICAT Standards	03			15	20	
1115	2016_17 Q4	BI249	Test and Development Telemetry System	01			06	20	
1116	2016_17 Q4	BI250	ANSWER Agricultural Need for Sustainable Willow Effluent Re	03			09	20	
1117	2016_17 Q4	BI254	Network Distribution Systems Control (NDCS) Phase 1	03			04	20	
1118	2016_17 Q4	BI259	Network Distribution control system pilot sites.	01			04	20	
1119	2016_17 Q4	BI272	Project Manager for the Property Address Cleansing Project Ph	01			06	20	

Baseline Milestone Dates / Baseline Service Cost Allocation

Sort Ref	Baseline A1 Date	Baseline Project Approval Date	Baseline Start on Site Date	Baseline Beneficial Use Date	Baseline Regulatory sign off Date	Baseline Completion of Construction Date	Baseline End of Maintenance Period Date	Baseline Service Allocation Water Infrastructure	Baseline Service Allocation Water Non-Infrastructure	Baseline Service Allocation Sewerage Infrastructure	Baseline Service Allocation Sewerage Non-Infrastructure
1	11	12	13	14	15	16	17	18	19	20	21
896			30/10/2009	04/08/2010		04/08/2010	04/08/2011	0	0	0	0
897			14/03/2008	26/02/2010		26/02/2010	31/08/2012	0	0	0	0
898			29/06/2007	01/02/2008		01/02/2008	31/01/2009	0	0	0	0
899			24/09/2012	05/07/2013		05/07/2013	05/07/2014	0	0	60	40
900								0	0	0	0
901								0	0	0	0
902				01/01/2017				0	0	0	0
904								0	0	0	0
905	16/07/2012	09/08/2012	01/10/2012	16/11/2012		16/11/2012	16/11/2013	0	0	0	0
906								0	0	0	0
908								0	0	0	0
909	11/05/2012	24/05/2012	08/03/2013	19/12/2014		19/12/2014	19/12/2015	0	0	0	100
910								0	0	0	0
911								0	0	0	0
912								0	0	0	0
913								0	0	0	0
914								0	0	0	0
916								0	0	0	0
917								0	0	0	0
919								0	0	0	0
923								0	0	100	0
930								0	0	100	0
932								0	0	100	0
975				31/03/2017				0	0	85	15
977			30/11/2009	23/12/2011		23/12/2011	22/12/2012	0	0	0	0
978			30/11/2009	25/09/2012		25/09/2012	25/09/2013	0	0	0	0
979			05/04/2010	31/12/2019		01/02/2008	31/01/2009	0	0	56	44
980			01/04/2013	31/12/2013		30/03/2014	30/03/2015	0	0	5	95
981			14/03/2008	04/09/2012		04/09/2012	04/09/2013	0	0	0	0
982			07/07/2008	15/12/2009		15/12/2009	15/12/2010	0	0	0	0
983	17/01/2006	25/10/2012	01/04/2013	03/01/2015		03/04/2015	03/01/2016	0	0	0	100
984			10/03/2011	28/02/2017		31/05/2010	31/05/2011	0	0	57	43
985			10/08/2009	03/03/2010		03/03/2010	03/03/2011	0	0	0	0
986			14/09/2009	15/04/2011		15/04/2011	14/04/2012	0	0	0	0
987			31/03/2015	31/03/2016		30/06/2016	30/06/2017	0	0	0	100
988			12/12/2011	19/08/2013		19/08/2013	19/08/2014	0	0	0	100
989			01/04/2014	01/01/2015		01/01/2015	01/01/2016	0	0	100	0
990								0	0	30	70
991			01/04/2013	30/09/2014		03/01/2015	03/01/2016	0	0	0	100
992			05/01/2014	19/01/2015		19/01/2015	19/01/2016	0	0	100	0
993			05/01/2014	19/01/2015		19/01/2015	19/01/2016	0	0	75	25
997			31/03/2014	19/01/2015		30/03/2015	30/03/2015	0	0	100	0
998								0	0	0	0
999			01/03/2013	31/12/2015		01/02/2014	01/02/2014	0	0	0	100
1000								0	0	0	100
1001								0	0	0	0
1002								0	0	0	0
1003								0	0	0	0
1004								0	0	0	0
1005				31/03/2021				0	0	38	62
1007								0	0	0	0
1008								0	0	17	83
1010								0	0	0	0
1015								0	0	0	0
1016				31/12/2017				0	0	41	59
1025			27/03/2012	28/03/2015		28/03/2015	28/03/2016	0	0	17	83
1026			02/02/2014	28/03/2015		28/03/2015	28/03/2016	0	0	0	100
1027			30/06/2013	01/01/2015		01/01/2015	01/01/2016	0	0	100	0
1028	22/03/2011	31/03/2011	13/11/2010	31/08/2011		31/08/2011	30/08/2012	0	0	0	0
1029			20/03/2012	19/01/2015		19/03/2015	19/03/2016	0	0	0	100
1030								0	0	0	0
1031								0	0	0	0
1039			28/05/2007	16/09/2011		16/09/2011	15/09/2012	0	0	0	0
1040			30/11/2009	01/10/2010		01/10/2010	01/10/2011	0	0	0	0
1041			01/04/2008	25/01/2012		25/01/2012	24/01/2013	0	0	0	0
1042			15/09/2008	25/01/2012		25/01/2012	24/01/2013	0	0	0	0
1043								0	0	30	70
1044								0	0	0	0
1045								0	0	0	100
1046								0	0	0	0
1047								0	0	0	0
1063		25/09/2012						0	0	0	0
1069								0	46	8	46
1091								0	0	100	0

Baseline Expenditure Profile (£m 2012-13 prices) / Baseline Purpose Allocation

Sort Ref	Baseline CAPEX 2010-11 £m	Baseline CAPEX 2011-12 £m	Baseline CAPEX 2012-13 £m	Baseline CAPEX 2013-14 £m	Baseline CAPEX 2014-15 £m	Baseline CAPEX 2015-16 £m	Baseline CAPEX 2016-17 £m	Baseline CAPEX 2017-18 £m	Baseline CAPEX 2018-19 £m	Baseline CAPEX 2019-20 £m	Baseline CAPEX 2020-21 £m	Baseline CAPEX 2021-22 £m	Baseline CAPEX 2022-23 £m	Baseline CAPEX 2023-24 £m	Baseline Purpose Allocation Quality	Baseline Purpose Allocation Base	Baseline Purpose Allocation ESL	Baseline Purpose Allocation Growth
1	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
896	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
897	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
898	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
899	0.000	0.000	0.000	0.305	0.766	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	67	0	0	33
900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
901	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
902	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
904	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
905	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
906	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
908	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
909	0.000	0.000	0.080	1.014	2.957	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0
910	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
911	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
912	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
913	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
914	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
916	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
917	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
919	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
923	0.000	0.000	0.000	0.000	0.000	0.572	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0
930	0.000	0.000	0.000	0.000	0.000	0.106	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	52	48	0
932	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0
975	0.000	0.000	0.000	0.000	0.000	0.092	1.924	0.000	0.000	0.000	0.000	0.000	0.000	0.000	80	0	0	20
977	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
978	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
979	0.040	0.020	0.011	0.369	0.009	0.000	0.000	2.227	6.838	6.761	0.859	0.000	0.000	0.000	63	19	0	18
980	0.047	0.004	0.126	0.664	0.046	0.172	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	44	26	0	30
981	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
982	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
983	0.229	-0.048	0.119	1.369	1.429	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	41	15	0	44
984	0.000	0.000	0.000	0.000	0.000	0.000	0.444	1.076	0.000	0.000	0.000	0.000	0.000	0.000	73	5	0	22
985	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
986	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
987	0.009	0.008	0.015	0.046	1.509	0.432	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	75	8	0	17
988	0.354	1.600	4.989	1.290	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	95	5	0	0
989	0.000	0.000	0.019	0.000	0.358	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	90	10	0	0
990	0.000	0.000	0.000	0.000	0.000	0.000	1.055	0.592	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0
991	0.000	0.000	0.056	1.509	0.461	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	90	10	0	0
992	0.000	0.000	0.084	0.221	2.167	1.616	0.723	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100	0	0	0
993	0.000	0.000	0.062	0.028	1.337	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	70	30	0	0
997	0.000	0.004	0.014	0.075	0.403	0.481	0.894	0.000	0.000	0.000	0.000	0.000	0.000	0.000	79	21	0	0
998	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
999	0.000	0.013	0.034	0.904	0.000	0.913	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	54	0	46
1000	0.000	0.005	0.032	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0
1001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.094	0.000	0.000	0.000	0	100	0	0
1007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1008	0.000	0.000	0.000	0.000	0.000	1.192	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	50	48	3	0
1010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1016	0.000	0.000	0.000	0.000	0.000	0.000	0.976	0.937	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0
1025	0.000	0.023	0.810	0.503	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	35	0	65
1026	0.012	0.056	0.064	0.092	0.768	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	31	38	0	31
1027	0.000	0.005	0.022	0.968	0.896	1.155	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	69	21	0	10
1028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1029	0.000	0.000	0.124	1.675	1.792	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	23	71	0	6
1030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1041	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1042	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1043	0.000	0.017	0.024	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0
1044	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1045	0.000	0.003	0.047	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	100	0	0
1046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0
1063	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1069	0	0	0	0	0	10.55917	10.308748	10.246895	10.185414	10.122427	10.064487	0	0	0	0	63.4154795	36.5845205	0
1091	0	0	0	0	0	0.4704296	0.4549163	0.4483053	0.44658	0.464993	0.4240832	0	0	0	0	100	0	0

Current Actual or Projected Milestone Dates / Current Actual or Projected Service Cost Allocation

Sort Ref	Current Actual or Projected A1 Date	Current Actual or Projected Project Approval Date	Current Actual or Projected Start on Site Date	Current Actual or Projected Beneficial Use Date	Current Actual or Projected Regulatory sign off Date	Current Actual or Projected Completion of Construction Date	Current Actual or Projected End of Maintenance Period Date	Current Actual or Projected Service Allocation Water Infrastructure	Current Actual or Projected Service Allocation Water Non-Infrastructure	Current Actual or Projected Service Allocation Sewerage Infrastructure	Current Actual or Projected Service Allocation Sewerage Non-Infrastructure
1	40	41	42	43	44	45	46	47	48	49	50
895	21/12/2016	23/12/2016						0	0	0	100
896	13/03/2009	09/04/2009	01/04/2010	09/01/2012		12/06/2014	17/07/2012	0	0	0	100
897	08/08/2007	17/08/2007	14/03/2008	25/02/2010		18/02/2011	31/08/2012	0	0	22	78
898			29/06/2007			28/03/2008		0	0	100	0
899	06/07/2012	10/07/2012	14/01/2013	20/12/2013		03/07/2015	02/09/2014	0	0	60	40
900								0	0	0	100
901	17/08/2015	19/08/2015	02/11/2015			25/03/2016		0	0	0	100
902								0	0	50	50
903	27/10/2015	29/10/2015						0	0	100	0
904								0	0	100	0
905	16/07/2012	09/08/2012	01/10/2012	30/11/2012		12/11/2012	13/02/2013	66	0	34	0
906	16/05/2016	19/05/2016						0	0	60	40
907								0	0	100	0
908	12/11/2014	18/11/2014	05/01/2015	09/06/2015		08/05/2015	27/07/2015	0	0	100	0
909	11/05/2012	24/05/2012		17/04/2014				0	0	0	100
910	18/02/2014	28/02/2014	02/06/2014	14/01/2015		29/09/2014	02/07/2015	0	0	100	0
911	13/11/2012	14/11/2012	30/11/2012	19/09/2013		31/10/2014	19/03/2014	0	0	0	100
912	13/11/2012	14/11/2012	30/11/2012	16/01/2015		28/07/2014	16/01/2015	0	0	0	100
913	16/11/2012	22/11/2012	30/11/2012	28/03/2014		28/03/2014	03/11/2014	0	0	0	100
914	16/11/2012	22/11/2012	30/11/2012	11/11/2014		29/11/2013	11/11/2014	0	0	0	100
915								0	0	0	100
916	04/08/2014	17/09/2014	26/01/2015	30/03/2015		02/02/2015	03/05/2016	0	0	100	0
917	16/11/2012	22/11/2012	19/03/2013	24/02/2014		22/10/2013	14/03/2014	0	0	100	0
918	12/12/2012	21/12/2012	04/02/2013	14/03/2013		25/03/2013	14/03/2013	0	0	100	0
919								0	0	100	0
920	12/05/2014	16/05/2014	30/06/2014	29/08/2014		28/07/2014	20/11/2014	0	0	100	0
921	15/08/2016	15/08/2016						0	0	0	100
922	06/03/2014	18/03/2014	01/07/2014	31/10/2014		26/06/2014		0	0	100	0
923								0	0	100	0
924								0	0	100	0
925								0	0	0	100
926								0	0	0	100
927								0	0	0	100
928								0	0	100	0
929	21/03/2014	25/03/2014						0	0	100	0
930								0	0	100	0
931								0	0	100	0
932	12/02/2016	19/02/2016						0	0	100	0
933								0	0	0	100
934								0	0	100	0
935	25/01/2017	30/01/2017						0	0	100	0
936								0	0	100	0
937	07/05/2015	08/05/2015	01/04/2015	31/07/2016		30/09/2016		0	0	100	0
938								0	0	100	0
939	16/01/2015	16/01/2015						0	0	100	0
940								0	0	100	0
941	19/01/2017	20/01/2017	20/10/2015					0	0	0	100
942								0	0	100	0
943								0	0	100	0
944								0	0	100	0
945								0	50	0	50
946	05/05/2016	10/05/2016						0	0	0	100
947								0	0	100	0
948								0	0	100	0
949								0	0	100	0
950								0	0	0	100
951								0	0	100	0
952								0	0	100	0
953								0	0	100	0
954	15/06/2016	16/06/2016	18/07/2016	14/12/2016			09/03/2017	0	0	100	0
955								0	0	100	0
956								0	0	100	0
957								0	0	100	0
958								0	0	0	100
959								0	0	100	0
960								0	0	0	100
961								0	0	100	0
962								0	0	100	0
963								0	0	100	0
964								0	0	100	0
965								0	0	100	0
966								0	0	0	100
967								0	0	100	0
968								0	0	100	0
969								0	0	100	0
970								0	0	100	0
971								0	0	100	0
972								0	0	100	0
973								0	0	0	100
974								0	0	100	0
975	01/06/2011	08/08/2011		31/12/2018				0	0	85	15
976	08/12/2016	08/12/2016	13/02/2017	24/02/2017				0	0	100	0
977	10/03/2008	11/03/2008	09/01/2012	31/03/2014		27/05/2013		0	0	53	47
978	07/03/2008	11/03/2008	30/11/2009	24/09/2012		11/03/2013	02/09/2014	0	0	54	46
979								0	0	56	44
980	04/04/2014	14/04/2014	03/11/2014	31/03/2015		28/08/2015		0	0	5	95
981	09/01/2008	14/01/2008	14/03/2008	03/09/2012		24/04/2009		0	0	4	96
982			07/07/2008	14/12/2009		26/04/2010		0	0	0	100
983			02/04/2012	20/03/2015		22/12/2014		0	0	0	100
984	25/11/2016	05/12/2016						0	0	71	29
985	30/04/2009	18/05/2009	10/08/2009	02/03/2010		25/01/2010		0	0	51	49
986	13/03/2009	27/03/2009	14/09/2009	25/10/2012		11/04/2011		0	0	100	0
987	16/11/2012	21/11/2012		31/03/2015				0	0	60	40
988	24/11/2010	12/01/2011	09/01/2012	09/12/2013		24/03/2014	06/05/2016	0	0	0	100
989				31/07/2017				0	0	100	0
990								0	0	30	70
991	04/06/2013	17/06/2013	19/11/2013	27/08/2014		30/09/2014		0	0	0	100
992	11/03/2016	11/03/2016	01/08/2016	31/07/2017		28/04/2017		0	0	13	87
993	04/06/2013	17/06/2013	25/11/2013	27/08/2014		26/09/2014		0	0	0	100
994	13/11/2012	14/11/2012	30/11/2012	31/03/2014		28/03/2014	03/11/2014	0	0	0	100
995	16/06/2014	17/07/2014	31/01/2014	30/03/2015			16/12/2015	0	0	0	100
996	16/11/2012	21/11/2012	30/11/2012	11/11/2014		30/05/2014	11/11/2014	0	0	0	100
997				30/03/2020				0	0	100	0
998								0	0	22	78
999	10/03/2014	18/03/2014	06/10/2014	10/03/2015		28/12/2015		0	0	6	94
1000								0	0	0	100
1001	18/05/2015	27/05/2015	12/10/2015	14/01/2016		29/01/2016		0	0	100	0
1002								0	0	0	100
1003	13/02/2015	16/02/2015						0	0	0	100
1004	17/02/2015	18/02/2015						0	0	0	100
1005								0	0	0	100
1006	15/05/2014	19/05/2014						0	0	0	100
1007								0	0	100	0
1008	18/09/2014	24/09/2014						0	0	17	83
1009								0	0	100	0
1010	13/02/2015	16/02/2015	02/11/2015			08/07/2016		0	0	85	15
1011	12/02/2016	19/02/2016						0	0	59	41
1012	22/05/2015	02/06/2015	04/04/2016	06/06/2016		18/12/2015		0	0	100	0
1013								0	0	100	0
1014								0	0	100	0
1015	29/01/2015	03/02/2015	23/02/2015			30/10/2015		0	0	35	65
1016								0	0	0	100
1017	15/02/2017	01/03/2017						0	0	100	0
1018	07/02/2017	01/03/2017						0	0	100	0
1019	20/12/2016	23/12/2016						0	0	100	0
1020	15/02/2017	01/03/2017						0	0	100	0
1021								0	0	0	100
1022								0	0	100	0
1023								0	0	100	0
1024	25/11/2016	05/12/2016						0	0	0	100
1025	08/06/2009	02/09/2009	05/03/2012	18/03/2014		30/06/2014	23/06/2015	0	0	17	83
1026	20/10/2011	24/10/2011	03/03/2014	28/11/2014		21/12/2015		0	0	12	88
1027	23/05/2014	03/06/2014		22/02/2016				0	0	100	0
1028	22/03/2011	31/03/2011				30/03/2017		0	0	100	0
1029	06/01/2012	10/01/2012	01/04/2013	18/03/2014		30/06/2014		0	0	0	100
1030	13/11/2012	14/11/2012	30/11/2012	14/01/2014		30/11/2012	03/11/2014	0	0	0	100
1031	13/11/2012	14/11/2012	30/11/2012	31/03/2014		29/11/2013	11/11/2014	0	0	0	100
1032								0	0	100	0
1033	15/02/2017	01/03/2017						0	0	100	0
1034								0	0	100	0
1035								0	0	100	0
1036	13/12/2016	19/12/2016		03/03/2017				0	0	100	0
1037								0	0	100	0
1038								0	0	100	0
1039	22/05/1997	03/09/1997	28/05/2007	15/09/2011		30/06/2008		0	0	30	70
1040	07/10/2009	14/10/2009	30/11/2009	30/09/2010		27/09/2010		0	0	65	35
1041	16/01/2008	23/01/2008	01/04/2008			03/03/2009		0	0	100	0
1042	04/04/2008	22/05/2008	15/09/2008	09/01/2009		05/01/2009		0	0	100	0
1043								0	0	0	100
1044								0	0	100	0
1045								0	0	0	100
1046	23/06/2014	17/07/2014	20/07/2015	29/04/2016		29/07/2016		0	0	0	100
1047	13/11/2012	14/11/2012	30/11/2012	14/05/2014		28/03/2014	06/11/2014	0	0	0	100
1048								0	0	100	0
1049								0	0	0	100
1050								0	0	0	100
1051	04/10/2016	14/10/2016						0	0	100	0
1052								0	0	50	50
1053	03/05/2016	10/05/2016	12/12/2016			03/08/2017		0	0	0	100
1054								0	0	100	0
1055								0	0	100	0
1056	24/10/2016	25/10/2016						0	0	0	100
1057	27/10/2015	14/12/2015		24/03/2016				0	0	0	100
1058								0	0	100	0
1059								0	0	10	90
1060								0	0	100	0
1061								0	0	100	0
1062								0	0	100	0
1063		41177						25	25	25	25
1064	42090	42114						0	0	100	0
1065	42172	42187						0	0	100	0
1066	42451	42451						0	50	0	50
1067	41724	41726						0	50	0	50
1068	41443	41444						25	25	25	25
1069								0	0	0	0
1070	42583	42583						0	50	0	50
1071	42824	42824						0	100	0	0
1072	40786	40793						0	0	100	0
1073	41206	41213						100	0	0	0
1074	41306	41311						0	0	100	0
1075	41319	41327						0	0	100	0
1076	41320	41327						100	0	0	0
1077	41297	41304						100	0	0	0
1078	41459	41471						0	0	100	0
1079	41355	41359						0	100	0	0
1080	41386	41387						0	40	20	40
1081	41424	41425						100	0	0	0
1082	41452	41453						0	0	100	0
1083	41495	41498						100	0	0	0
1084	41500	41502						0	0	100	0
1085	41528	41538						0	0	100	0
1086	41495	41498						0	0	100	0
1087	41500	41502						0	0	100	0
1088	41477	41485						0	0	100	0
1089	41841	41845						100	0	0	0
1090	41739	41743						0	0	100	0
1091	41869	41869						0	0	100	0
1092	41856	41862						100	0	0	0
1093	41844	41845						100	0	0	0
1094	42384	42384						0	100	0	0
1095	42047	42047						0	100	0	0
1096	42430	42430						0	0	0	100
1097	41078	41080						0	100	0	0
1098	41079	41087						0	100	0	0
1099	41519	41529						0	50	0	50
1100	41540	41541						0	100	0	0
1101	41792	41792						0	50	0	50
1102	41892	41899						0	50	0	50
1103	41170	41180						0	49	0	51
1104	42424	42481						25	25	25	25
1105	42236	42236						0	100	0	0
1106	42306	42306						0	9	0	91
1107	40882	40886						0	49	0	51
1108	40569	40569						0	100	0	0
1109	40828	40837						0	70	0	30
1110								0	0	0	100
1111	40830	40837						0	100	0	0
1112	40862	40863						0	50	0	50
1113	40847	40856						0	100	0	0
1114	41653	41655						0	50	0	50
1115	41264	41281						0	50	0	50
1116	41276	41277						0	0	0	100
1117	41683	41688						0	100	0	0
1118	41264	41274						0	100	0	0
1119	41278	41278						0	100	0	0

Current Actual or Projected Capital Expenditure Profile (£m money of the day)

Sort Ref	CAPEX Year to date £m	CAPEX 2010-11 £m	CAPEX 2011-12 £m	CAPEX 2012-13 £m	CAPEX 2013-14 £m	CAPEX 2014-15 £m	CAPEX 2015-16 £m	CAPEX 2016-17 £m	CAPEX 2017-18 £m	CAPEX 2018-19 £m	CAPEX 2019-20 £m	CAPEX 2020-21 £m	CAPEX 2021-22 £m	CAPEX 2022-23 £m	CAPEX 2023-24 £m
1	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
895	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.040	4.962	1.618	0.000	0.000	0.000	0.000	0.000
896	-0.002	3.056	2.047	0.137	0.314	0.008	0.000	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
897	-0.002	0.238	-0.006	0.000	0.000	0.000	0.000	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
898	0.000	0.000	0.004	-0.001	0.000	0.000	-0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
899	0.042	0.000	0.000	0.360	1.605	-0.019	0.001	0.042	0.001	0.000	0.000	0.000	0.000	0.000	0.000
900	0.000	0.002	0.005	0.270	0.470	0.166	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
901	0.133	0.000	0.000	0.000	0.037	0.004	0.647	0.133	0.025	0.000	0.000	0.000	0.000	0.000	0.000
902	0.000	0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.030	0.000	1.100	2.000	2.900	0.000	0.000
903	0.056	0.000	0.000	0.000	0.000	0.000	0.108	0.056	1.959	1.450	0.000	0.000	0.000	0.000	0.000
904	0.004	0.000	0.007	0.007	0.000	0.002	0.015	0.004	0.000	0.000	0.000	0.000	0.000	1.500	0.000
905	0.007	0.000	0.013	0.089	-0.002	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000
906	0.082	0.000	0.033	0.010	0.120	0.042	0.050	0.082	0.652	0.000	0.000	0.000	0.000	0.000	0.000
907	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000
908	-0.002	0.000	0.001	0.006	-0.001	0.105	0.069	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
909	0.000	0.000	0.000	0.449	1.694	0.141	-0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
910	0.000	0.000	0.000	0.025	0.056	0.924	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
911	0.000	0.000	0.000	0.037	0.204	0.028	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
912	-0.001	0.000	0.000	0.039	0.422	0.342	0.008	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
913	0.000	0.000	0.000	0.124	0.952	0.141	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
914	0.000	0.000	0.000	0.150	0.954	0.315	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
915	0.006	0.000	0.000	0.002	0.008	0.000	-0.006	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000
916	0.000	0.000	0.000	0.003	0.001	0.035	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
917	0.000	0.000	0.000	0.054	0.034	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
918	0.000	0.000	0.000	0.067	-0.014	-0.001	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
919	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.000
920	0.000	0.000	0.000	0.003	0.005	0.035	-0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
921	0.000	0.000	0.000	0.000	0.025	0.017	0.058	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
922	0.000	0.000	0.000	0.000	0.012	0.057	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
923	0.000	0.000	0.000	0.000	0.000	0.008	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
924	0.000	0.000	0.000	0.000	0.105	-0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
925	0.005	0.000	0.000	0.000	0.025	0.000	-0.005	0.005	0.000	0.000	0.000	0.000	0.700	0.000	0.000
926	0.094	0.000	0.000	0.000	0.129	0.113	0.121	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.000
927	0.059	0.000	0.000	0.000	0.035	0.020	0.041	0.059	2.035	1.006	1.500	0.000	0.000	0.000	0.000
928	0.000	0.000	0.000	0.000	-0.005	0.000	0.000	0.000	0.000	0.000	0.052	0.000	0.000	0.000	0.000
929	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.000	0.000
930	0.018	0.000	0.000	0.000	0.000	0.008	-0.004	0.018	0.123	0.000	0.000	0.000	0.000	0.000	0.000
931	0.000	0.000	0.000	0.000	0.000	0.024	0.023	0.000	0.244	1.676	0.200	0.000	0.000	0.000	0.000
932	0.014	0.000	0.000	0.000	0.000	0.016	0.001	0.014	0.222	0.000	0.000	0.000	0.000	0.000	0.000
933	0.265	0.000	0.000	0.000	0.000	0.000	0.070	0.265	0.215	0.110	0.110	0.000	0.000	0.000	0.000
934	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.053	0.000	0.000	0.000
935	0.178	0.000	0.000	0.000	0.000	0.011	0.059	0.178	0.920	1.907	0.000	0.000	0.000	0.000	0.000
936	0.031	0.000	0.000	0.000	0.000	0.000	0.013	0.031	0.001	0.000	1.000	1.000	0.000	0.000	0.000
937	0.170	0.000	0.000	0.000	0.000	0.027	0.770	0.170	0.000	0.000	0.000	0.000	0.000	0.000	0.000
938	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.173	0.000	0.000	0.000	0.000	0.000
939	0.000	0.000	0.000	0.000	0.000	0.205	-0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
940	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.000	0.000	0.000	0.000	0.000
941	0.019	0.000	0.000	0.000	0.000	0.000	0.010	0.019	0.755	0.000	0.000	0.000	0.000	0.000	0.000
942	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.097	0.000	0.000	0.000	0.000	0.000	0.000
943	0.115	0.000	0.000	0.000	0.000	0.000	0.011	0.115	0.523	0.000	0.000	0.000	0.000	0.000	0.000
944	0.013	0.000	0.000	0.000	0.000	0.000	0.010	0.013	0.005	0.000	0.000	0.000	0.000	0.000	0.000
945	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
946	3.870	0.000	0.000	0.000	0.000	0.000	0.000	3.870	0.148	3.326	4.125	2.575	0.000	0.000	0.000
947	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.027	0.000	0.000	0.000	0.000	0.000	0.000
948	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000
949	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.000
950	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
951	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.000
952	0.004	0.000	0.000	0.000	0.000	0.000	0.004	0.004	0.000	0.200	0.000	0.000	0.000	0.000	0.000
953	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.071	0.000	0.000	0.000	0.000	0.000	0.000
954	0.819	0.000	0.000	0.000	0.000	0.000	0.000	0.819	0.001	0.000	0.000	0.000	0.000	0.000	0.000
955	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.033	0.000	0.000	0.000	0.000	0.000
956	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.000	0.250	0.000	0.000	0.000	0.000	0.000
957	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.037	0.000	0.000	0.000	0.000	0.000
958	0.048	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.000	0.000	0.000
959	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.034	0.000	0.000	0.000	0.000	0.000
960	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.004	0.150	0.200	0.000	0.000	0.000	0.000
961	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.186	0.000	0.000	0.000
962	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.023	0.000	0.000	0.000	0.000	0.000	0.000
963	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.060	0.000	0.000	0.000	0.000	0.000
964	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.041	0.000	0.000	0.000	0.000	0.000
965	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.000	0.000	0.000	0.000	0.000
966	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.017	0.000	0.000	0.000	0.000	0.000	0.000
967	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.000	0.000
968	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.000	0.000	0.000	0.000	0.000	0.000
969	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.000	0.000	0.000	0.000	0.000
970	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000
971	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.000	0.000	0.000	0.000	0.000	0.000
972	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.061	0.000	0.000	0.000	0.000	0.000	0.000
973	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.250	0.000	0.000	0.000	0.000	0.000
974	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000
975	0.060	0.047	0.004	0.026	-0.001	0.058	0.010	0.060	0.613	0.687	0.000	0.000	0.000	0.000	0.000
976	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000
977	0.000	2.409	0.687	3.679	-0.049	-0.057	-0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
978	0.000	1.083	0.469	0.609	-0.065	0.001	-0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
979	0.012	0.040	0.020	0.023	0.030	0.061	-0.011	0.012	1.119	4.287	7.616	2.100	0.000	0.000	0.000
980	0.091	0.000	0.000	0.000	0.000	0.873	0.201	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.000
981	0.026	0.013	-0.004	0.013	0.012	0.012	0.030	0.026	0.014	0.015	0.000	0.000	0.000	0.000	0.000
982	0.000	0.125	-0.070	0.023	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
983	0.268	0.229	-0.049	0.555	2.780	0.579	0.234	0.268	0.045	0.000	0.000	0.000	0.000	0.000	0.000
984	0.046	0.022	0.034	0.026	0.036	0.056	0.012	0.046	2.548	2.100	0.000	0.000	0.000	0.000	0.000
985	0.000	0.000	-0.002	0.004	0.000	0.000	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
986	0.000	0.009	-0.007	0.015	-0.001	0.000	-0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
987	0.043	0.009	0.008	0.024	0.343	0.761	0.710	0.043	0.008	0.000	0.000	0.000	0.000	0.000	0.000
988	0.000	0.354	1.638	5.446	2.679	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
989	0.000	0.000	0.000	0.020	-0.002	0.007	0.007	0.000	0.000	0.000	0.400	0.000	0.000	0.000	0.000
990	0.004	0.000	0.000	0.072	-0.024	0.027	-0.002	0.004	1.100	1.150	0.000	0.000	0.000	0.000	0.000
991	0.007	0.000	0.000	0.059	1.107	0.571	-0.037	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000
992	1.585	0.000	0.000	0.088	-0.003	0.131	0.103	1.585	1.119	0.000	0.000	0.000	0.000	0.000	0.000
993	0.000	0.000	0.000	0.065	1.043	0.256	-0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
994	0.000	0.000	0.000	0.032	0.198	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
995	0.001	0.000	0.000	0.000	0.006	0.346	0.004	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
996	0.000	0.000	0.000	0.096	0.593	0.071	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
997	0.004	0.000	0.004	0.027	0.043	0.025	0.061	0.004	0.031	0.000	1.864	1.400	0.000	0.000	0.000
998	0.014	0.000	0.005	0.041	-0.003	0.000	0.011	0.014	0.000	0.018	0.000	0.000	0.000	0.500	0.000
999	0.092	0.000	0.013	0.033	0.036	1.451	0.729	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1000	0.008	0.000	0.005	0.014	0.044	0.008	-0.001	0.008	0.002	0.000	0.000	0.000	2.000	0.000	0.000
1001	0.015	0.000	0.000	0.010	0.010	0.000	0.257	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1002	0.000	0.000	0.000	0.029	-0.005	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1003	0.016	0.000	0.000	0.020	0.004	0.002	0.064	0.016	0.740	0.977	0.274	0.000	0.000	0.000	0.000
1004	0.001	0.000	0.000	0.018	0.005	0.002	0.068	0.001	0.010	0.031	1.244	0.774	0.000	0.000	0.000
1005	0.000	0.000	0.000	0.006	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1006	0.000	0.000	0.000	0.002	0.012	0.010	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.032	0.000	0.000	0.000
1008	0.072	0.000	0.000	0.000	0.000	0.061	0.660	0.072	0.009	0.020	0.000	0.000	0.000	0.000	0.000
1009	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.015	0.000	0.000	0.000	0.250	0.000	0.000
1010	0.020	0.000	0.000	0.000	0.000	0.006	0.133	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1011	0.104	0.000	0.000	0.000	0.004	0.012	0.016	0.104	0.013	0.000	0.000	0.000	0.000	0.000	0.000
1012	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1013	0.020	0.000	0.000	0.000	0.000	0.010	0.033	0.020	0.103	-0.100	0.440	0.000	0.000	0.000	0.000
1014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.224	0.000	0.000	0.000	0.000	0.000
1015	0.132	0.000	0.000	0.000	0.000	0.264	1.301	0.132	0.072	0.000	0.000	0.000	0.000	0.000	0.000
1016	0.000	0.000	0.000	0.000	0.000	0.000	0.035	0.000	0.920	0.870	0.200	0.000	0.000	0.000	0.000
1017	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.038	0.000	0.000	0.000	0.000	0.000
1018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.027	0.000	0.000	0.000	0.000	0.000	0.000
1019	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.028	0.023	0.000	0.000	0.000	0.000	0.000	0.000
1020	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.025	0.000	0.000	0.000	0.000	0.000	0.000
1021	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.006	0.000	0.300	0.000	0.000	0.000	0.000
1022	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.022	0.169	0.000	0.000	0.000	0.000	0.000	0.000
1023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.059	0.000	0.000	0.000	0.000	0.000	0.000
1024	0.777	0.000	0.000	0.000	0.000	0.000	0.000	0.777	3.209	0.072	0.000	0.000	0.000	0.000	0.000
1025	0.003	0.000	0.024	0.287	1.202	0.031	0.012	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1026	0.055	0.012	0.057	0.014	0.216	1.442	0.042	0.055	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1027	0.138	0.000	0.005	0.005	0.073	0.273	0.439	0.138	0.112	0.469	0.000	0.000	0.000	0.000	0.000
1028	0.041	0.002	0.001	0.000	0.000	0.000	0.002	0.041	0.000	0.005	0.000	0.000	0.000	0.000	0.000
1029	0.021	0.000	0.000	0.443	3.742	0.240	0.008	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1030	-0.001	0.000	0.000	0.013	0.056	0.000	0.000	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1031	0.000	0.000	0.000	0.032	0.117	0.039	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.000
1033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000
1034	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000
1035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051	0.000	0.000	0.000	0.000	0.000
1036	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.000
1038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.000	0.000	0.000	0.000	0.000
1039	0.000	0.010	0.000	0.006	0.000	0.000	-0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1040	-0.005	0.014	0.006	-0.061	0.000	0.000	0.000	-0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1041	0.000	0.000	-0.003	0.002	0.000	0.000	-0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1042	0.000	0.000	-0.002	0.000	0.000	0.000	-0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1043	0.012	0.000	0.017	-0.008	0.020	0.050	0.000	0.012	0.002	0.000	0.000	0.500	0.000	0.000	0.000
1044	0.000	0.000	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.004	0.090	0.000	0.000	0.000	0.000
1045	0.010	0.000	0.003	0.017	0.060	-0.001	0.000	0.010	0.001	0.000	0.000	1.000	0.000	0.000	0.000
1046	0.000	0.000	0.000	0.005	0.001	0.043	0.670	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1047	0.000	0.000	0.000	0.052	0.270	0.003	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1048	0.001	0.000	0.000	0.000	0.004	0.012	0.001	0.001	0.027	0.500	0.000	0.000	0.000	0.000	0.000
1049	0.029	0.000	0.000	0.000	0.025	0.000	0.000	0.029	0.000	0.000	0.000	1.000	0.000	0.000	0.000
1050	0.003	0.000	0.000	0.000	0.025	0.000	0.000	0.003	0.000	0.000	0.000	0.700	0.000	0.000	0.000
1051	0.010	0.000	0.000	0.000	0.000	0.005	-0.001	0.010	0.135	0.000	0.000	0.000	0.000	0.000	0.000
1052	0.025	0.000	0.000	0.000	0.000	0.000	0.090	0.025	0.040	2.300	2.200	2.200	1.825	0.000	0.000
1053	1.101	0.000	0.000	0.000	0.000	0.004	0.010	1.101	0.696	0.164	0.000	0.000	0.000	0.000	0.000
1054	0.016	0.000	0.000	0.000	0.000	0.003	0.142	0.016	0.009	0.000	0.000	0.000	0.000	0.000	0.000
1055	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.000
1056	0.007	0.000	0.000	0.000	0.000	0.000	0.008	0.007	0.005	0.023	0.005	0.000	0.244	0.025	0.000
1057	0.012	0.000	0.000	0.000	0.000	0.000	0.117	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1058	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.049	0.000	0.000	0.000	0.000	0.000
1059	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.095	0.000	0.000	0.000	0.000	0.000	0.000
1060	0.058	0.000	0.000	0.000	0.000	0.000	0.000	0.058	0.003	0.000	0.000	0.000	0.000	0.000	0.000
1061	0	0	0	0	0	0	0	0	0.035	0	0	0	0	0	0
1062	0	0	0	0	0	0	0	0	0	0.045	0	0	0	0	0
1063	0.057	0.001	0	0	0.087	-0.001	0.046	0.057	0	0	0	0	0	0	0
1064	0.019	0	0	0	0	0.006	0.05	0.019	0	0	0	0	0	0	0
1065	1.056	0	0	0	0	0	0.375	1.056	1.599	0	0	0	0	0	0
1066	0	0	0	0	0	0	0.021	0	0	0	0	0	0	0	0
1067	0	0	0	0	0	0.083	0.138	0	0	0	0	0	0	0	0
1068	0	0	0	0	0.158	0.09	-0.004	0	0	0	0	0	0	0	0
1069	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1070	0.27	0	0	0	0	0	0	0.27	0.184	0.107	0.115	0.115	0	0	0
1071	0.005	0	0	0	0	0	0	0.005	0.143	0	0	0	0	0	0
1072	0	0	0.13	0.152	0	0	-0.008	0	0	0	0	0	0	0	0
1073	-0.004	0	0	0	0.498	0.061	-0.017	-0.004	0	0	0	0	0	0	0
1074	0	0	0	0.015	0.065	0.015	0.002	0	0	0	0	0	0	0	0
1075	0.029	0	0	0	0.093	0.02	0.027	0.029	0.033	0	0	0	0	0	0
1076	0	0	0	0.298	-0.042	0	-0.005	0	0	0	0	0	0	0	0
1077	0	0	0	0	0.469	0.18	-0.038	0	0	0	0	0	0	0	0
1078	0	0	0	0	0.047	0.091	0.001	0	0	0	0	0	0	0	0
1079	0	0	0	0.02	0.422	0.127	-0.001	0	0	0	0	0	0	0	0
1080	0	0	0	0	0.058	0	-0.001	0	0	0	0	0	0	0	0
1081	0	0	0	0	0.012	0.117	0.014	0	0	0	0	0	0	0	0
1082	0	0	0	0	0.006	0.003	-0.001	0	0	0	0	0	0	0	0
1083	0	0	0	0	0.226	0.029	-0.01	0	0	0	0	0	0	0	0
1084	0	0	0	0	0.157	0.034	-0.001	0	0	0	0	0	0	0	0
1085	0	0	0	0	0.035	0.092	-0.001	0	0	0	0	0	0	0	0
1086	0	0	0	0	0.015	0.011	0.004	0	0	0	0	0	0	0	0
1087	0	0	0	0	0.033	0.063	0.022	0	0	0	0	0	0	0	0
1088	0	0	0	0	0.012	0.02	-0.002	0	0	0	0	0	0	0	0
1089	0.006	0	0	0	0	0.17	0.056	0.006	0	0	0	0	0	0	0
1090	0	0	0	0	0	0.249	-0.004	0	0	0	0	0	0	0	0
1091	0	0	0	0	0	0.097	0	0	0	0	0	0	0	0	0
1092	0	0	0	0	0	0.242	-0.022	0	0	0	0	0	0	0	0
1093	-0.005	0	0	0	0	0.415	0.183	-0.005	0	0	0	0	0	0	0
1094	0.008	0	0	0	0	0	0.02	0.008	0	0	0	0	0	0	0
1095	-0.001	0	0	0	0	0.006	0.016	-0.001	0	0	0	0	0	0	0
1096	0.042	0	0	0	0	0	0	0.042	0	0	0	0	0	0	0
1097	0	0	0	0.215	0.013	0.019	0.001	0	0	0	0	0	0	0	0
1098	0	0	0	0.173	0.009	0	0.011	0	0	0	0	0	0	0	0
1099	0	0	0	0	0.264	0.265	-0.01	0	0	0	0	0	0	0	0
1100	0	0	0	0	0.06	0.015	-0.002	0	0	0	0	0	0	0	0
1101	0.535	0	0	0	0	1.472	0.831	0.535	0.254	0	0	0	0	0	0
1102	0	0	0	0	0	0.399	0.031	0	0	0	0	0	0	0	0
1103	-0.001	0	0	0.195	0	0	0	-0.001	0	0	0	0	0	0	0
1104	0.118	0	0	0	0	0	0.132	0.118	0	0	0	0	0	0	0
1105	0.063	0	0	0	0	0	0.061	0.063	0.25	0	0	0	0	0	0
1106	0.012	0	0	0	0	0	0.197	0.012	0	0	0	0	0	0	0
1107	0	0	0.064	0.007	0	0	-0.008	0	0	0	0	0	0	0	0
1108	0	0.014	0.097	0.08	0.105	0.185	-0.013	0	0	0	0	0	0	0	0
1109	0	0.043	-0.006	0	0	0	-0.017	0	0	0	0	0	0	0	0
1110	0	0	0	0	0	0	-0.006	0	0	0	0	0	0	0	0
1111	0	0	0.024	0.042	0	0	-0.02	0	0	0	0	0	0	0	0
1112	0	0	0	0.032	0.017	0	-0.006	0	0	0	0	0	0	0	0
1113	0	0	0.02	0	0.004	0	-0.001	0	0	0	0	0	0	0	0
1114	0	0	0	0	0.039	0.156	0.014	0	0	0	0	0	0	0	0
1115	0	0	0	0.101	0.009	0	-0.009	0	0	0	0	0	0	0	0
1116	0	0	0	0.001	0.007	-0.006	0.005	0	0	0	0	0	0	0	0
1117	0	0	0	0	0	0.145	0.008	0	0	0	0	0	0	0	0
1118	0	0	0	0.025	0.001	0	-0.006	0	0	0	0	0	0	0	0
1119	0	0	0	0.022	0.004	0	-0.005	0	0	0	0	0	0	0	0

Current Actual or Projected Purpose Allocation (%) / Current Actual or Projected IRE (%) / Nominated outputs (PC Period)

Sort Ref	Current Actual or Projected Purpose Allocation Quality	Current Actual or Projected Purpose Allocation Base	Current Actual or Projected Purpose Allocation ESL	Current Actual or Projected Purpose Allocation Growth	Current Actual or Projected IRE Allocation Water	Current Actual or Projected IRE Allocation Sewerage	Nominated Output
1	66	67	68	69	70	71	72
895	0	100	0	0	0	0	01
896	73	12	0	15	0	0	09
897	32	15	0	53	0	7	09
898	0	56	0	44	0	56	01
899	67	0	0	33	0	0	08
900	40	36	12	12	0	0	01
901	0	100	0	0	0	0	01
902	100	0	0	0	0	0	03
903	0	0	100	0	0	0	01
904	0	0	100	0	0	0	01
905	0	100	0	0	66	34	01
906	0	60	40	0	0	40	03
907	0	100	0	0	0	100	01
908	90	10	0	0	0	10	01
909	0	100	0	0	0	0	08
910	0	100	0	0	0	100	01
911	2	70	28	0	0	0	01
912	50	37	13	0	0	0	01
913	0	98	2	0	0	0	01
914	0	88	12	0	0	0	01
915	0	100	0	0	0	0	01
916	0	0	0	100	0	0	01
917	0	100	0	0	0	100	01
918	0	0	0	100	0	0	01
919	0	0	0	100	0	0	01
920	0	0	0	100	0	0	01
921	100	0	0	0	0	0	01
922	0	100	0	0	0	100	01
923	0	100	0	0	0	100	01
924	0	100	0	0	0	100	01
925	45	35	0	20	0	0	03
926	40	36	12	12	0	0	01
927	0	100	0	0	0	0	01
928	0	0	0	100	0	0	01
929	0	0	0	100	0	0	01
930	0	50	50	0	0	50	01
931	0	10	90	0	0	10	01
932	0	23	0	77	0	23	01
933	44	26	0	30	0	0	01
934	0	0	0	100	0	0	01
935	13	5	82	0	0	5	01
936	0	9	91	0	0	9	01
937	0	100	0	0	0	100	01
938	0	0	0	100	0	0	01
939	0	100	0	0	0	100	01
940	0	0	0	100	0	0	01
941	0	100	0	0	0	0	01
942	0	0	0	100	0	0	01
943	0	100	0	0	0	100	01
944	0	100	0	0	0	100	01
945	0	40	60	0	0	0	01
946	0	79	0	21	0	0	01
947	0	0	0	100	0	0	01
948	0	10	90	0	0	10	01
949	0	0	0	100	0	0	01
950	75	25	0	0	0	0	10
951	0	100	0	0	0	100	01
952	0	0	0	100	0	0	01
953	0	0	0	100	0	0	01
954	100	0	0	0	0	0	02
955	0	0	0	100	0	0	01
956	0	100	0	0	0	100	01
957	0	0	0	100	0	0	01
958	0	100	0	0	0	0	01
959	0	0	0	100	0	0	01
960	0	100	0	0	0	0	01
961	0	0	0	100	0	0	01
962	0	0	0	100	0	0	01
963	0	0	0	100	0	0	01
964	0	0	0	100	0	0	01
965	0	0	0	100	0	0	01
966	0	100	0	0	0	0	01
967	0	0	0	100	0	0	01
968	0	0	0	100	0	0	01
969	0	0	0	100	0	0	01
970	0	0	0	100	0	0	01
971	0	0	0	100	0	0	01
972	0	0	0	100	0	0	01
973	41	43	0	16	0	0	03
974	0	100	0	0	0	100	01
975	80	0	0	20	0	0	02
976	0	0	0	100	0	0	01
977	53	0	0	47	0	0	09
978	40	0	0	60	0	0	09
979	64	18	0	18	0	10	02
980	0	68	0	32	0	5	08
981	36	39	0	25	0	1	09
982	42	42	0	16	0	0	09
983	41	15	0	44	0	0	08
984	0	78	0	22	0	56	02
985	0	9	0	91	0	0	01
986	0	26	0	74	0	26	01
987	72	14	0	14	0	10	02
988	77	23	0	0	0	0	08
989	100	0	0	0	0	0	02
990	100	0	0	0	0	0	02
991	88	12	0	0	0	0	08
992	84	16	0	0	0	3	02
993	100	0	0	0	0	0	08
994	26	70	4	0	0	0	
995	0	100	0	0	0	0	01
996	12	74	14	0	0	0	08
997	70	30	0	0	0	30	02
998	85	15	0	0	0	2	03
999	0	53	0	47	0	3	02
1000	34	26	0	40	0	0	03
1001	0	0	100	0	0	0	01
1002	40	36	12	12	0	0	01
1003	81	19	0	0	0	0	03
1004	78	22	0	0	0	0	03
1005	0	100	0	0	0	0	02
1006	0	100	0	0	0	0	
1007	0	0	0	100	0	0	01
1008	54	46	0	0	0	13	02
1009	90	10	0	0	0	10	10
1010	90	10	0	0	0	10	02
1011	0	100	0	0	0	59	01
1012	0	0	0	100	0	0	01
1013	0	50	50	0	0	50	01
1014	0	0	0	100	0	0	01
1015	100	0	0	0	0	0	02
1016	0	100	0	0	0	0	02
1017	0	0	0	100	0	0	01
1018	0	0	0	100	0	0	01
1019	0	0	0	100	0	0	01
1020	0	0	0	100	0	0	01
1021	0	100	0	0	0	0	01
1022	0	0	100	0	0	0	01
1023	0	0	0	100	0	0	01
1024	0	100	0	0	0	0	01
1025	0	35	0	65	0	7	08
1026	26	37	0	37	0	4	08
1027	70	20	0	10	0	20	02
1028	0	0	0	100	0	0	01
1029	23	71	0	6	0	0	08
1030	2	86	12	0	0	0	01
1031	2	98	0	0	0	0	01
1032	0	0	0	100	0	0	01
1033	0	0	0	100	0	0	01
1034	0	0	0	100	0	0	01
1035	0	0	0	100	0	0	01
1036	0	0	100	0	0	0	01
1037	0	0	0	100	0	0	01
1038	0	0	0	100	0	0	01
1039	62	35	0	3	0	3	01
1040	53	0	0	47	0	0	09
1041	0	0	0	100	0	0	01
1042	0	100	0	0	0	100	01
1043	44	26	0	30	0	0	03
1044	0	100	0	0	0	100	01
1045	34	26	0	40	0	0	03
1046	0	100	0	0	0	0	01
1047	14	45	41	0	0	0	01
1048	0	100	0	0	0	100	01
1049	37	60	0	3	0	0	03
1050	48	24	0	28	0	0	03
1051	0	100	0	0	0	100	01
1052	69	21	0	10	0	10	01
1053	0	60	40	0	0	0	01
1054	0	100	0	0	0	100	01
1055	0	0	0	100	0	0	01
1056	20	25	0	55	0	0	03
1057	0	100	0	0	0	0	01
1058	0	0	0	100	0	0	01
1059	0	52	0	48	0	6	01
1060	0	80	0	20	0	80	01
1061	0	0	0	100	0	0	01
1062	0	0	0	100	0	0	01
1063	0	100	0	0	25	25	01
1064	0	100	0	0	0	100	01
1065	35	30	21	14	0	30	01
1066	0	0	100	0	0	0	
1067	0	100	0	0	0	0	
1068	0	100	0	0	25	25	
1069	0	0	0	0	0	0	
1070	0	100	0	0	0	0	
1071	0	100	0	0	0	0	
1072	0	100	0	0	0	100	01
1073	0	100	0	0	100	0	
1074	0	100	0	0	0	100	
1075	0	100	0	0	0	100	
1076	0	100	0	0	100	0	
1077	0	100	0	0	100	0	
1078	0	100	0	0	0	100	
1079	0	100	0	0	0	0	
1080	0	100	0	0	0	20	
1081	0	100	0	0	100	0	
1082	0	100	0	0	0	100	
1083	0	100	0	0	100	0	
1084	0	100	0	0	0	100	
1085	0	100	0	0	0	100	
1086	0	100	0	0	0	100	
1087	0	100	0	0	0	100	
1088	0	100	0	0	0	100	
1089	100	0	0	0	0	0	01
1090	0	100	0	0	0	100	
1091	0	100	0	0	0	100	
1092	0	100	0	0	100	0	
1093	0	100	0	0	100	0	
1094	0	100	0	0	0	0	
1095	0	0	100	0	0	0	
1096	0	100	0	0	0	0	
1097	0	0	100	0	0	0	
1098	0	0	100	0	0	0	
1099	0	0	100	0	0	0	
1100	0	0	100	0	0	0	
1101	0	0	100	0	0	0	
1102	0	50	50	0	0	0	
1103	0	100	0	0	0	0	
1104	0	0	100	0	0	0	
1105	0	100	0	0	0	0	
1106	0	55	45	0	0	0	01
1107	0	0	100	0	0	0	
1108	100	0	0	0	0	0	
1109	0	100	0	0	0	0	
1110	0	0	100	0	0	0	
1111	0	100	0	0	0	0	
1112	0	100	0	0	0	0	
1113	0	100	0	0	0	0	
1114	0	0	100	0	0	0	
1115	0	100	0	0	0	0	
1116	0	0	100	0	0	0	
1117	0	90	10	0	0	0	
1118	0	0	100	0	0	0	
1119	0	100	0	0	0	0	

Project Identification									
Sort Ref	CIM Submission Reference	Project ID Reference	Project Name	PC Project Period	Parent Project ID	Substitute Project ID	Primary Asset Category	PC10 Programme	Regulatory Sign-Off Required
1	2	3	4	5	6	7	8	9	10
1120	2016_17 Q4	BI280	ICAT Programme Manager - Level 3	03			14	20	
1121	2016_17 Q4	BI282	ILMS Schneider Hardware & Software Support	03			03	20	
1122	2016_17 Q4	BI287	PC15 Innovation Programme Projects	06			15	20	
1123	2016_17 Q4	BI291	MCC replacement at Killyclogher SR	03			04	20	
1124	2016_17 Q4	BI295	Sludge Density Monitoring Using Coreollis Flowmeters	03			02	20	
1125	2016_17 Q4	BI301	i WATCH (Intelligent Water Automation, Telemetry and Control I	06			03	20	
1126	2016_17 Q4	BI303	Use of thermal and near infrared camera's in conjunction with ai	06			15	20	
1127	2016_17 Q4	BI305	Revision of Sewers for Adoption (N.I.)	06			14	20	
1128	2016_17 Q4	BI307	White water trials	06			06	20	
1129	2016_17 Q4	BI310	Service Reservoir Inspection and cleaning pilots	06			06	20	
1130	2016_17 Q4	BT004	Telemetry Radio Digital Upgrade	00			15	20	
1131	2016_17 Q4	BT005	Scada Services Provision	00			15	20	
1132	2016_17 Q4	BT021	Enhancement program for End of Life equiptments 7 Ethernet d	01			15	20	
1133	2016_17 Q4	BT023	HVCA Implementation Project	01			15	20	
1134	2016_17 Q4	CE004	SME support for Capital Efficiency Portfolio	06			15	20	
1135	2016_17 Q4	CE005	ACE Programme Placeholder					20	
1136	2016_17 Q4	CE006	In-sourcing Network Modelling Into Strategic Client					20	
1137	2016_17 Q4	CO001	Commercial Excellence					20	
1138	2016_17 Q4	CS001	Customer Connections	02			06	20	
1139	2016_17 Q4	CS007	Account Services Case Mgmt	01			15	20	
1140	2016_17 Q4	CS008	Self Service Phase 2	01			14	20	
1141	2016_17 Q4	CU001	1CEX1 Metering & Billing	06			0	20	
1142	2016_17 Q4	CU002	PC15 ICAT Delivery - Omagh / Cookstown Area	04	BE014		06	20	
1143	2016_17 Q4	CU003	PC15 ICAT Delivery - Belfast Area		BE014			20	
1144	2016_17 Q4	CU004	PC15 ICAT Delivery - Newry Area					20	
1145	2016_17 Q4	CU011	Customer Satisfaction - Near Time Real Time	06			15	20	
1146	2016_17 Q4	EP013	Capitalisation of Estates Maintenance	00			15	20	
1147	2016_17 Q4	EP017	Electricity generation from wind power or alternative green ener	06			09	02	
1148	2016_17 Q4	EP031	Intelligent Pump Manager IWWF West Region	02	EP046		12	20	
1149	2016_17 Q4	EP037	Climate Change Mitigation - Reducing Emissions	02			15	20	
1150	2016_17 Q4	EP038	Additional Accommodation and Upgrades at Westland House	00			14	20	
1151	2016_17 Q4	EP039	NIW Contaminated Land Remedial Project	06			15	20	
1152	2016_17 Q4	EP040	Ballycastle Depot - Remediation of Contamination.	01			15	20	
1153	2016_17 Q4	EP043	Capital Maintenance 13/14 & 14/15	03			15	20	
1154	2016_17 Q4	EP045	Enniskillen Area: Provision of MIP Facilities	03			06	20	
1155	2016_17 Q4	EP052	CPMR imps PC15	06			11	20	
1156	2016_17 Q4	EP053	Estates management PC15	06			15	20	
1157	2016_17 Q4	FR014	Oracle E-business suite minor enhancements during PC13	03			15	20	
1158	2016_17 Q4	FR015	Capital allowance review	05			15	20	
1159	2016_17 Q4	FR017	Computer Associates upgrade related to new Oracle E-business	05			15	20	
1160	2016_17 Q4	FR018	Enhancements to the Oracle E-Business Suite and Associated S	06			15	20	
1161	2016_17 Q4	FR020	16/17 Enhancement to Oracle E-Bus Suite and Associated Syst	06			15	20	
1162	2016_17 Q4	FR021	Migration of Oracle EBS & OBIEE to new OVM/Linux hardware	06			15	20	
1163	2016_17 Q4	FR022	17/18 Minor enhancements to the Oracle E-business suite and (	06			15	20	
1164	2016_17 Q4	HR002	Creation of Interface between NI Water's payroll and Capita Em	03			15	20	
1165	2016_17 Q4	HR005	Payroll Changes in relation to CARE 2015 pension introduction	06			15	20	
1166	2016_17 Q4	HR006	Oracle OLM Change Request	06			15	20	
1167	2016_17 Q4	HR007	Oracle 2016 enhancements	06			15	20	
1168	2016_17 Q4	IA001	Data Analytics Solution	06			15	20	
1169	2016_17 Q4	IT002	Provision and support of corporate AutoCAD MAP 3D Licenses	00			14	20	
1170	2016_17 Q4	IT004	PC Refresh Programme	01			06	20	
1171	2016_17 Q4	IT010	ICT – Telemetry Base Maintenance	02			15	20	
1172	2016_17 Q4	IT038	MWM Toughbook Refresh Project	03			15	20	
1173	2016_17 Q4	IT039	Mobile Work Management (MWM) Contract Renewal	03			15	20	
1174	2016_17 Q4	IT043	Information Flows 2	03			15	20	
1175	2016_17 Q4	IT050	Telecoms Infrastructure Improvement	03			15	20	
1176	2016_17 Q4	IT055	MC2 Implementation	03			15	20	
1177	2016_17 Q4	IT056	Slieve Gallion mast site refurbishment	06			15	20	
1178	2016_17 Q4	IT068	Site SCADA Upgrade	03			14	20	
1179	2016_17 Q4	IT069	ICT Base Maintenance	05			15	20	
1180	2016_17 Q4	IT070	EMCI	03			15	20	
1181	2016_17 Q4	IT071	MC1 Exit Plan	03			15	20	
1182	2016_17 Q4	IT072	Implementation of PCI DSS	04			15	20	
1183	2016_17 Q4	IT073	EMCI Phase 2	04			15	20	
1184	2016_17 Q4	IT076	ICT Base Maintenance 15/16	06			15	20	
1185	2016_17 Q4	IT077	SCADA Services Provision	06			15	20	
1186	2016_17 Q4	IT082	Telemetry Server Hardware Replacement	03			15	20	
1187	2016_17 Q4	IT085	Microsoft Enterprise Agreement	06			15	20	
1188	2016_17 Q4	IT086	ICT Base Maintenance	06			15	20	
1189	2016_17 Q4	IT087	Additional Blades and Finance Netbackup Licenses	06			15	20	
1190	2016_17 Q4	IT089	Corporate Wifi	06			15	20	
1191	2016_17 Q4	IT090	Mobile Phone Refresh 2016	06			15	20	
1192	2016_17 Q4	IT091	Desktop & Laptop Refresh	06			15	20	
1193	2016_17 Q4	IT093	CSD Dashboard	06			15	20	
1194	2016_17 Q4	IT094	ICT Base Maintenance 17 18	06			15	20	
1195	2016_17 Q4	IT095	Desktop Hardware Refresh	06			15	20	
1196	2016_17 Q4	IT098	Information Assurance					20	
1197	2016_17 Q4	IT099	Telemetry Outstation Refresh Project - Phase 2	06			15	20	
1198	2016_17 Q4	LC001	Silent Valley Park Enhancement	01			06	20	
1199	2016_17 Q4	NA004	Laboratory Capital Equipment	01			15	20	
1200	2016_17 Q4	NA006	NIAMP4 Project Support	02			15	20	
1201	2016_17 Q4	NA018	LIMS Server Upgrade	06			15	20	
1202	2016_17 Q4	NA020	Remote Sampler Hardware Refresh	03			15	20	
1203	2016_17 Q4	NA025	Upgrade of LIMS AQC Module to AqcTools	05			15	20	
1204	2016_17 Q4	NA035	Purchase of Automatic Sampling Equipment and Batteries	06			14	20	
1205	2016_17 Q4	OP041	Meter Reading Hand Held Units & Software	05			06	20	
1206	2016_17 Q4	OP042	TMG - Fleet Purchases 13/14	03			15	20	
1207	2016_17 Q4	OP048	Toughbook Refresh Project – Cradle purchase & installation	03			15	20	
1208	2016_17 Q4	OP058	M&E Stores Rationalisation	06			15	20	
1209	2016_17 Q4	OP060	TMG Fleet Purchases - 15/16	06			15	20	
1210	2016_17 Q4	OP061	Emergency Planning 15/16	06			15	20	
1211	2016_17 Q4	OP062	Water Fittings Regulations Connect3 System	06			06	20	
1212	2016_17 Q4	OP063	Emergency Emergency Holding line 16/17	06			15	20	
1213	2016_17 Q4	OP064	TMG - Vehicle & Plant Replacements 16/17	06			15	20	
1214	2016_17 Q4	OP065	Lone Worker Refresh	06			15	20	
1215	2016_17 Q4	OP067	TMG - V&P Requirements (17/18)	06			15	20	
1216	2016_17 Q4	PL001	Ops Contracts Material Testing	06			15	20	
1217	2016_17 Q4	PL002	2PL2 Wastewater PL Phase 1	06			15	20	
1218	2016_17 Q4	PL005	Energy Efficiency - Process Optimisation	06			15	20	
1219	2016_17 Q4	QC011	Laboratory Capital Equipment 12/13	01			15	20	
1220	2016_17 Q4	QC012	Laboratory Equipment 13/14 & 14/15	03			15	20	
1221	2016_17 Q4	QC015	Defibrillators for NIW depots & Hubs	03			06	20	
1222	2016_17 Q4	QC018	Laboratory Capital 15/16	06			15	20	
1223	2016_17 Q4	QC019	2015/16 SCAMP NI (Sustainable Catchment Area Management	06			06	03	
1224	2016_17 Q4	QC020	Watson Marlow pump - Crypto	06			15	20	
1225	2016_17 Q4	QC021	2016/17 SCAMP NI (Sustainable Catchment Area Management	06			06	03	
1226	2016_17 Q4	QC022	Laboratory Capital 16/17	06			06	20	
1227	2016_17 Q4	QC023	Laboratory Capital 17/18	06			06	20	
1228	2016_17 Q4	QC024	2017/18 SCAMP NI (Sustainable Catchment Area Management	06			06	03	
1229	2016_17 Q4	BN051	PC15 Ops Capital (Sewerage) BSP & SDB Parent	06			07	18	
1230	2016_17 Q4	CF114	Installation of water meters and separations Baseline	06			03	19	
1231	2016_17 Q4	LN134	Leakage Parent PC15	06			03	09	
1232	2016_17 Q4	WS121	Ops Capital (Water) BSP & SDB Parent PC15	06			03	10	
1233	2016_17 Q4	CS020	Capitalised Salaries and On-Costs	00				00	
1234	2016_17 Q4		Leakage-Detection	00			03	09	
1235	2016_17 Q4		Leakage-Repairs	00			03	09	
1236	2016_17 Q4		Leakage-Other	00			03	09	
1237	2016_17 Q4		Water Supply	00			02	10	
1238	2016_17 Q4		Wastewater	00			09	18	
1239	2016_17 Q4		Customer Field Services	00			03	19	
1240	2016_17 Q4		DSCT-Water	00			03	10	
1241	2016_17 Q4		DSCT-Sewerage	00			07	18	
1242	2016_17 Q4		M & E	00			09	18	
1243	2016_17 Q4		Networks Water	00			03	10	
1244	2016_17 Q4		Lead Pipe	00			03	10	
1245	2016_17 Q4		Cost of connections sewerage	00			07	18	
1246	2016_17 Q4		Cost of connnections water	00			03	10	
1247	2016_17 Q4		Cost of watermains relignment	00			03	10	
1248	2016_17 Q4		Cost of Sewer realignment	00			07	18	
END	END	END	END	END	END	END	END	END	END

	Baseline Milestone Dates							Baseline Service Cost Allocation			
Sort Ref	Baseline A1 Date	Baseline Project Approval Date	Baseline Start on Site Date	Baseline Beneficial Use Date	Baseline Regulatory sign off Date	Baseline Completion of Construction Date	Baseline End of Maintenance Period Date	Baseline Service Allocation Water Infrastructure	Baseline Service Allocation Water Non-Infrastructure	Baseline Service Allocation Sewerage Infrastructure	Baseline Service Allocation Sewerage Non-Infrastructure
1	11	12	13	14	15	16	17	18	19	20	21
1147								0	0	0	100
1229								0	0	23	77
1230								0	100	0	0
1231								45	55	0	0
1232								56	44	0	0
1233								29	12	11	48
END	END	END	END	END	END	END	END	END	END	END	END

	Baseline Expenditure Profile (£m 2012-13 prices)														Baseline Purpose Allocation			
Sort Ref	Baseline CAPEX 2010-11 £m	Baseline CAPEX 2011-12 £m	Baseline CAPEX 2012-13 £m	Baseline CAPEX 2013-14 £m	Baseline CAPEX 2014-15 £m	Baseline CAPEX 2015-16 £m	Baseline CAPEX 2016-17 £m	Baseline CAPEX 2017-18 £m	Baseline CAPEX 2018-19 £m	Baseline CAPEX 2019-20 £m	Baseline CAPEX 2020-21 £m	Baseline CAPEX 2021-22 £m	Baseline CAPEX 2022-23 £m	Baseline CAPEX 2023-24 £m	Baseline Purpose Allocation Quality	Baseline Purpose Allocation Base	Baseline Purpose Allocation ESL	Baseline Purpose Allocation Growth
1	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
1147	0	0	0	0	0	0	0	1.9454573	0	0	0	0	0	0	0	0	100	0
1229						7.3268691	7.2829079	7.2392105	7.1957752	7.1526005	7.1096849				0	91.4836271	0	8.51637295
1230						3.779818	3.7086724	3.6459526	3.5838519	3.5623488	3.5409747				0	88.6246844	0	11.3753156
1231						2.6868816	2.6871512	2.5541049	2.6292809	2.6106645	2.4801691				0	79.9866463	0	20.0133537
1232						6.199965	6.1627652	6.1257886	6.0890339	6.0524997	6.0161847				4.84577735	52.5113819	0	42.6428407
1233						11.283935	11.216232	11.202815	11.135598	11.068785	11.002372				23.1896065	57.4857214	3.86493442	15.4597377
END	END	END	END	END	END	END	END	END	END	END	END	END	END	END	END	END	END	END

	Current Actual or Projected Milestone Dates							Current Actual or Projected Service Cost Allocation			
Sort Ref	Current Actual or Projected A1 Date	Current Actual or Projected Project Approval Date	Current Actual or Projected Start on Site Date	Current Actual or Projected Beneficial Use Date	Current Actual or Projected Regulatory sign off Date	Current Actual or Projected Completion of Construction Date	Current Actual or Projected End of Maintenance Period Date	Current Actual or Projected Service Allocation Water Infrastructure	Current Actual or Projected Service Allocation Water Non-Infrastructure	Current Actual or Projected Service Allocation Sewerage Infrastructure	Current Actual or Projected Service Allocation Sewerage Non-Infrastructure
1	40	41	42	43	44	45	46	47	48	49	50
1120	41870	41877						0	50	0	50
1121	41530	41538						0	100	0	0
1122								0	50	0	50
1123	41619	41623						0	100	0	0
1124	41674	41677						0	100	0	0
1125	42201	42205						0	100	0	0
1126	42332	42332						0	100	0	0
1127	42397	42397						0	0	100	0
1128								0	100	0	0
1129								0	100	0	0
1130	40605	40626						0	49	0	51
1131	40416	40441						0	23	0	77
1132	40828	40834						0	40	0	60
1133	41031	41037						0	50	0	50
1134	42397	42397						25	25	25	25
1135								25	25	25	25
1136								40	10	40	10
1137								25	25	25	25
1138	40808	40815						0	50	0	50
1139	40870	40892						0	100	0	0
1140	40870	40892						0	60	0	40
1141	42360	42373						0	100	0	0
1142	42411	42411						0	100	0	0
1143								0	100	0	0
1144								0	100	0	0
1145	42530	42542						0	50	0	50
1146	40715	40764						0	50	0	50
1147	40423	40441						0	20	0	80
1148	41199	41200						0	0	0	100
1149	42248	42249						0	50	0	50
1150								0	50	0	50
1151								0	50	0	50
1152								0	60	0	40
1153	41439	41449						0	50	0	50
1154	41568	41571						0	100	0	0
1155	42151	42153						0	50	0	50
1156	42095	42097						0	50	0	50
1157	41596	41641						0	50	0	50
1158	41725	41726						0	50	0	50
1159	42206	42277						0	50	0	50
1160	42248	42277						0	50	0	50
1161	42479	42559						0	50	0	50
1162	42712	42807						0	50	0	50
1163								0	50	0	50
1164	41992	41992						0	50	0	50
1165	42236	42256						0	50	0	50
1166	42233	42256						0	50	0	50
1167								0	50	0	50
1168	42431	42431						0	50	0	50
1169	40742	40746						0	49	0	51
1170	40779	40781						0	51	0	49
1171	41228	41232						0	50	0	50
1172	41516	41519						0	51	0	49
1173	41326	41332						0	51	0	49
1174	41555	41562						0	50	0	50
1175	41618	41624						0	50	0	50
1176	41604	41610						0	51	0	49
1177	42171	42178						0	100	0	0
1178	41687	41688						0	49	0	51
1179	41772	41772						0	50	0	50
1180	41767	41772						0	49	0	51
1181	41808	41809						0	50	0	50
1182	41809	41810						0	55	0	45
1183	41894	41894						0	49	0	51
1184	42146	42150						0	50	0	50
1185	42118	42118						0	49	0	51
1186	42069	42072						0	50	0	50
1187	42102	42102						0	50	0	50
1188	42517	42523						0	50	0	50
1189	42394	42394						0	50	0	50
1190	42431	42431						0	50	0	50
1191	42485	42488						0	50	0	50
1192	42682	42682						0	50	0	50
1193	42695	42695						0	51	0	49
1194								0	50	0	50
1195								0	50	0	50
1196								0	50	0	50
1197	42797	42802						0	50	0	50
1198	41292	41310						0	100	0	0
1199	40589	40589						0	49	0	51
1200	41417	41421						25	25	25	25
1201	42668	42670						0	50	0	50
1202	41558	41569						0	50	0	50
1203	41947	41949						0	50	0	50
1204	42786	42786						0	0	0	100
1205	41694	41694						0	100	0	0
1206	41536	41540						0	62	0	38
1207	41577	41582						0	50	0	50
1208	42666	42675						0	30	0	70
1209	42227	42234						0	62	0	38
1210	42268	42269						0	100	0	0
1211								0	100	0	0
1212	42660	42662						0	100	0	0
1213	42555	42556						0	62	0	38
1214	42662	42662						0	50	0	50
1215								0	60	0	40
1216	42258	42258						0	100	0	0
1217	42380	42380						0	0	0	100
1218	42382	42382						0	0	0	100
1219	40935	40942						0	51	0	49
1220	41430	41437						0	51	0	49
1221	41491	41498						0	50	0	50
1222	42159	42159						0	51	0	49
1223	42132	42135						0	100	0	0
1224	42109	42109						0	100	0	0
1225	42475	42476						0	100	0	0
1226	42579	42579						0	51	0	49
1227	42818	42823						0	51	0	49
1228	42725	42739						0	100	0	0
1229											
1230											
1231											
1232											
1233								24.9797242	19.0592052	14.8418491	41.1192214
1234								100	0	0	0
1235								100	0	0	0
1236								50	50	0	0
1237								0	100	0	0
1238								0	0	62	38
1239								0	100	0	0
1240								100	0	0	0
1241								0	0	100	0
1242								0	1	0	99
1243								52	48	0	0
1244								100	0	0	0
1245								0	0	100	0
1246								100	0	0	0
1247								100	0	0	0
1248								0	0	100	0
END	END	END	END	END	END	END	END	END	END	END	END

	Current Actual or Projected Capital Expenditure Profile (£m money of the day)														
Sort Ref	Current Actual or Projected CAPEX Year to date £m	Current Actual or Projected CAPEX 2010-11 £m	Current Actual or Projected CAPEX 2011-12 £m	Current Actual or Projected CAPEX 2012-13 £m	Current Actual or Projected CAPEX 2013-14 £m	Current Actual or Projected CAPEX 2014-15 £m	Current Actual or Projected CAPEX 2015-16 £m	Current Actual or Projected CAPEX 2016-17 £m	Current Actual or Projected CAPEX 2017-18 £m	Current Actual or Projected CAPEX 2018-19 £m	Current Actual or Projected CAPEX 2019-20 £m	Current Actual or Projected CAPEX 2020-21 £m	Current Actual or Projected CAPEX 2021-22 £m	Current Actual or Projected CAPEX 2022-23 £m	Current Actual or Projected CAPEX 2023-24 £m
1	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
1120	0	0	0	0	0.039	0.069	0.001	0	0	0	0	0	0	0	0
1121	0	0	0	0	0.015	0	-0.008	0	0	0	0	0	0	0	0
1122	0	0	0	0	0	0	0	0	0.15	0.55	0.55	0.55	0	0	0
1123	0	0	0	0	0.006	0	-0.007	0	0	0	0	0	0	0	0
1124	0	0	0	0	0.03	0	-0.002	0	0	0	0	0	0	0	0
1125	0	0	0	0	0	0	0.044	0	0	0	0	0	0	0	0
1126	0	0	0	0	0	0	0.006	0	0	0	0	0	0	0	0
1127	0.035	0	0	0	0	0	0	0.035	0.001	0	0	0	0	0	0
1128	0	0	0	0	0	0	0	0	0.06	0	0	0	0	0	0
1129	0	0	0	0	0	0	0	0	0.04	0	0	0	0	0	0
1130	0.005	0	1.29	0.244	0.093	0	0	0.005	0.02	0	0	0	0	0	0
1131	0	0.208	0.168	0.167	0.065	0.065	-0.001	0	0	0	0	0	0	0	0
1132	0	0	0.295	0.138	0.226	0	-0.033	0	0	0	0	0	0	0	0
1133	0	0	0	0.335	0	0	-0.021	0	0	0	0	0	0	0	0
1134	0.225	0	0	0	0	0	0.01	0.225	0.401	0	0	0	0	0	0
1135	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0
1136	0	0	0	0	0	0	0	0	0.472	0	0	0	0	0	0
1137	0	0	0	0	0	0	0	0	0.3	0	0	0	0	0	0
1138	0	0	0.103	0.126	0.013	0.05	-0.05	0	0	0	0	0	0	0	0
1139	0	0	0.031	0.048	0.025	0.03	-0.017	0	0	0	0	0	0	0	0
1140	0	0	0.13	0.463	0.158	0.004	0.002	0	0	0	0	0	0	0	0
1141	0.726	0	0	0	0	0	0.19	0.726	1.444	1.436	0.1	0.1	0	0	0
1142	0.851	0	0	0	0	0	0	0.851	0.064	0	0	0	0	0	0
1143	0	0	0	0	0	0	0	0	1.044	0	0	0	0	0	0
1144	0	0	0	0	0	0	0	0	0.463	0.4	0	0	0	0	0
1145	0	0	0	0	0	0	0	0	0.066	0	0	0	0	0	0
1146	0	0	0.136	0.121	0.147	0.002	-0.001	0	0	0	0	0	0	0	0
1147	1.173	0.08	-0.045	0.028	0.05	0.051	0.003	1.173	0	0	0	0	0	0	0
1148	0	0	0	0.186	0.041	0.012	-0.001	0	0	0	0	0	0	0	0
1149	0.064	0	0	0.001	0.041	0.003	0.096	0.064	0	0	0	0	0	0	0
1150	0.007	0	0	0.005	0.015	0.013	0	0.007	0.04	0	0	6	0	0	0
1151	0	0	-0.002	0	0.033	0	-0.001	0	0	0.137	0	0	0	0	0
1152	0	0	0	0	0.017	-0.002	0	0	0	0.097	0	0	0	0	0
1153	0	0	0	0	0.236	0.174	-0.008	0	0	0	0	0	0	0	0
1154	0	0	0	0	0.015	0.094	0.009	0	0	0	0	0	0	0	0
1155	0.055	0	0	0	0	0	0.085	0.055	0.06	0.06	0.06	0.06	0.234	0	0
1156	0.088	0	0	0	0	0	0.108	0.088	0.1	0.132	0.132	0.132	0	0	0
1157	0	0	0	0	0.05	0.075	0.001	0	0	0	0	0	0	0	0
1158	0	0	0	0	0.088	0.078	-0.027	0	0	0	0	0	0	0	0
1159	0	0	0	0	0	0.01	0.029	0	0	0	0	0	0	0	0
1160	0	0	0	0	0	0	0.088	0	0	0	0	0	0	0	0
1161	0.157	0	0	0	0	0	0	0.157	0	0	0	0	0	0	0
1162	0.1	0	0	0	0	0	0	0.1	0.175	0	0	0	0	0	0
1163	0	0	0	0	0	0	0	0	0.05	0	0	0	0	0	0
1164	0	0	0	0	0	0.176	0.002	0	0	0	0	0	0	0	0
1165	0	0	0	0	0	0	0.09	0	0	0	0	0	0	0	0
1166	0	0	0	0	0	0	0.01	0	0	0	0	0	0	0	0
1167	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0	0
1168	0.007	0	0	0	0	0	0	0.007	0	0	0	0	0	0	0
1169	0.059	0	0.051	0	0	0.045	0	0.059	0	0	0.047	0	0	0	0
1170	-0.004	0	1.105	0.36	0	0	0	-0.004	0	0	0	0	0	0	0
1171	1.116	0	0	0.039	0.052	0.392	1.552	1.116	0.36	0	0.001	0	0.001	0	0
1172	-0.009	0	0	0	0.877	0.059	0.05	-0.009	0	0	0	0	0	0	0
1173	-0.019	0	0	0	0.128	0	0	-0.019	0	0	0	0	0	0	0
1174	0	0	0	0	0.026	0.008	-0.002	0	0	0	0	0	0	0	0
1175	-0.003	0	0	0	0.095	0.015	0	-0.003	0	0	0	0	0	0	0
1176	0.035	0	0	0	0.604	1.998	0.615	0.035	0.248	0.248	0.289	0.165	0	0	0
1177	0.152	0	0	0	0	0	0.087	0.152	0	0	0	0	0	0	0
1178	-0.002	0	0	0	0.706	0.141	0	-0.002	0	0	0	0	0	0	0
1179	0.001	0	0	0	0	0.637	0.029	0.001	0	0	0	0	0	0	0
1180	-0.008	0	0	0	0	0.024	0	-0.008	0	0	0	0	0	0	0
1181	-0.022	0	0	0	0	0.11	0.05	-0.022	0	0	0	0	0	0	0
1182	0.045	0	0	0	0	0.037	0.048	0.045	0	0	0	0	0	0	0
1183	-0.002	0	0	0	0	0.262	-0.001	-0.002	0	0	0	0	0	0	0
1184	0.046	0	0	0	0	0	0.576	0.046	0	0	0	0	0	0	0
1185	0.174	0	0	0	0	0	0.057	0.174	0.057	0.057	0.057	0.057	0.057	0	0
1186	0	0	0	0	0	0.005	0.033	0	0	0	0	0	0	0	0
1187	0	0	0	0	0	0	0.777	0	0.252	0	0	0	0	0	0
1188	0.673	0	0	0	0	0	0	0.673	0.039	0	0	0	0	0	0
1189	0	0	0	0	0	0	0.119	0	0	0	0	0	0	0	0
1190	0.327	0	0	0	0	0	0	0.327	0	0	0	0	0	0	0
1191	0.041	0	0	0	0	0	0	0.041	0	0	0	0	0	0	0
1192	0.412	0	0	0	0	0	0	0.412	0	0	0	0	0	0	0
1193	0.038	0	0	0	0	0	0	0.038	0	0	0	0	0	0	0
1194	0	0	0	0	0	0	0	0	0.933	0	0	0	0	0	0
1195	0	0	0	0	0	0	0	0	0.75	0	0	0	0	0	0
1196	0	0	0	0	0	0	0	0	0.258	0	0	0	0	0	0
1197	0.011	0	0	0	0	0	0	0.011	1.5	0	0	0	0	0	0
1198	0	0	0	0.059	-0.003	-0.066	0.005	0	0	0	0	0	0	0	0
1199	-0.001	0.106	0.003	0	0	0	-0.001	-0.001	0	0	0	0	0	0	0
1200	0	0	0	0.02	0.568	0.354	0.002	0	0	0	0	0	0	0	0
1201	0.067	0	0	0	0	0	0	0.067	0.003	0	0	0	0	0	0
1202	0	0	0	0	0.069	0.061	-0.004	0	0	0	0	0	0	0	0
1203	0.002	0	0	0	0	0.029	-0.001	0.002	0	0	0	0	0	0	0
1204	0.02	0	0	0	0	0	0	0.02	0	0	0	0	0	0	0
1205	0	0	0	0	0.216	0.079	0.016	0	0	0	0	0	0	0	0
1206	0	0	0	0	1.885	0	-0.006	0	0	0	0	0	0	0	0
1207	-0.032	0	0	0	0.45	0.098	0.047	-0.032	0	0	0	0	0	0	0
1208	0	0	0	0	0	0	0	0	0.329	0	0	0	0	0	0
1209	-0.005	0	0	0	0	0	0.816	-0.005	0	0	0	0	0	0	0
1210	0	0	0	0	0	0	0.058	0	0	0	0	0	0	0	0
1211	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0
1212	0.02	0	0	0	0	0	0	0.02	0	0	0	0	0	0	0
1213	1.791	0	0	0	0	0	0	1.791	0	0	0	0	0	0	0
1214	0.012	0	0	0	0	0	0	0.012	0	0	0	0	0	0	0
1215	0	0	0	0	0	0	0	0	1.1	0	0	0	0	0	0
1216	0.001	0	0	0	0	0	0.001	0.001	0	0	0	0	0	0	0
1217	0	0	0	0	0	0	0.088	0	0	0.088	0	0	0	0	0
1218	0.072	0	0	0	0	0	0.176	0.072	0.1	0	0	0	0	0	0
1219	0	0	0	0.071	0	0	-0.004	0	0	0	0	0	0	0	0
1220	0.087	0	0	0	0.223	0.234	-0.022	0.087	0	0	0	0	0	0	0
1221	0	0	0	0	0.015	0	-0.003	0	0	0	0	0	0	0	0
1222	0.004	0	0	0	0	0	0.046	0.004	0	0	0	0	0	0	0
1223	0.001	0	0	0	0	0	0.15	0.001	0	0	0	0	0	0	0
1224	0	0	0	0	0	0	0.002	0	0	0	0	0	0	0	0
1225	0.207	0	0	0	0	0	0	0.207	0	0.25	0	0	0	0	0
1226	0.041	0	0	0	0	0	0	0.041	0	0	0	0	0	0	0
1227	0	0	0	0	0	0	0	0	0.043	0	0	0	0	0	0
1228	0	0	0	0	0	0	0	0	0.195	0.027	0	0	0	0	0
1229															
1230															
1231															
1232															
1233	12.31827				11.543	11.72437	12.446	12.31827							
1234	0.514				0.538	0.541	0.564	0.514							
1235	0.309				0.229	0.229	0.309	0.309							
1236	1.872				2.442	2.309	1.895	1.872							
1237	1.744				1.9736	1.425	1.804	1.744							
1238	4.851				4.191	3.693	4.792	4.851							
1239	2.747				2.301	2.477	3.25	2.747							
1240	1.716				1.419	1.211	1.33	1.716							
1241	0.104				0.46	0.561	0.357	0.104							
1242	6.524				6.9229018	6.298	6.564	6.524							
1243	2.416				2.3002856	2.171	2.299	2.416							
1244	0.281				0.331	0.368	0.421	0.281							
1245	0.919				0.6770196	0.827	0.951	0.919							
1246	2.102				1.7395546	1.787	1.722	2.102							
1247	0.013				0.1100535	0.045	0.082	0.013							
1248	0.015				0.0963594	0.018	0	0.015							
END	END	END	END	END	END	END	END	END	END	END	END	END	END	END	END

	Current Actual or Projected Purpose Allocation (%)				Current Actual or Projected IRE (%)		Nominated outputs (PC Period)
Sort Ref	Current Actual or Projected Purpose Allocation Quality	Current Actual or Projected Purpose Allocation Base	Current Actual or Projected Purpose Allocation ESL	Current Actual or Projected Purpose Allocation Growth	Current Actual or Projected IRE Allocation Water	Current Actual or Projected IRE Allocation Sewerage	Nominated Output
1	66	67	68	69	70	71	72
1120	0	0	100	0	0	0	
1121	0	0	100	0	0	0	
1122	0	50	50	0	0	0	
1123	0	100	0	0	0	0	
1124	0	100	0	0	0	0	
1125	0	72	28	0	0	0	
1126	0	0	100	0	0	0	
1127	0	100	0	0	0	100	
1128	0	100	0	0	0	0	
1129	0	100	0	0	0	0	
1130	0	100	0	0	0	0	
1131	34	26	10	30	0	0	
1132	0	100	0	0	0	0	
1133	0	0	100	0	0	0	
1134	0	0	100	0	0	0	
1135	0	0	100	0	0	0	
1136	30	0	20	50	0	0	
1137	0	0	100	0	0	0	
1138	0	0	100	0	0	0	
1139	0	100	0	0	0	0	
1140	0	0	100	0	0	0	
1141	0	0	100	0	0	0	
1142	0	72	28	0	0	0	
1143	0	72	28	0	0	0	
1144	0	72	28	0	0	0	
1145	0	0	100	0	0	0	
1146	0	100	0	0	0	0	
1147	0	0	100	0	0	0	01
1148	0	100	0	0	0	0	
1149	0	100	0	0	0	0	
1150	0	100	0	0	0	0	
1151	0	100	0	0	0	0	
1152	0	100	0	0	0	0	
1153	0	100	0	0	0	0	
1154	0	100	0	0	0	0	
1155	0	50	50	0	0	0	
1156	0	100	0	0	0	0	
1157	0	0	100	0	0	0	
1158	0	100	0	0	0	0	
1159	0	0	100	0	0	0	
1160	0	100	0	0	0	0	
1161	0	100	0	0	0	0	
1162	0	100	0	0	0	0	01
1163	0	0	100	0	0	0	01
1164	0	100	0	0	0	0	
1165	0	100	0	0	0	0	
1166	0	0	100	0	0	0	
1167	0	0	100	0	0	0	
1168	0	0	100	0	0	0	
1169	0	100	0	0	0	0	
1170	0	100	0	0	0	0	
1171	0	100	0	0	0	0	
1172	0	0	100	0	0	0	
1173	0	100	0	0	0	0	
1174	0	100	0	0	0	0	
1175	0	100	0	0	0	0	
1176	0	100	0	0	0	0	
1177	0	100	0	0	0	0	
1178	0	100	0	0	0	0	
1179	0	100	0	0	0	0	
1180	0	0	100	0	0	0	
1181	0	0	100	0	0	0	
1182	0	0	100	0	0	0	
1183	0	0	100	0	0	0	
1184	0	100	0	0	0	0	
1185	0	49	51	0	0	0	
1186	0	100	0	0	0	0	
1187	0	100	0	0	0	0	
1188	0	100	0	0	0	0	
1189	0	100	0	0	0	0	
1190	0	0	100	0	0	0	
1191	30	30	20	20	0	0	
1192	0	100	0	0	0	0	01
1193	0	100	0	0	0	0	
1194	0	100	0	0	0	0	01
1195	0	100	0	0	0	0	01
1196	0	100	0	0	0	0	
1197	0	100	0	0	0	0	01
1198	0	100	0	0	0	0	
1199	0	100	0	0	0	0	
1200	0	100	0	0	25	25	
1201	0	100	0	0	0	0	
1202	0	100	0	0	0	0	
1203	0	100	0	0	0	0	
1204	0	100	0	0	0	0	
1205	0	70	30	0	0	0	
1206	0	100	0	0	0	0	
1207	0	0	100	0	0	0	
1208	0	100	0	0	0	0	
1209	0	100	0	0	0	0	
1210	0	100	0	0	0	0	
1211	0	100	0	0	0	0	
1212	0	100	0	0	0	0	
1213	0	100	0	0	0	0	
1214	0	100	0	0	0	0	01
1215	0	100	0	0	0	0	01
1216	0	100	0	0	0	0	
1217	0	0	100	0	0	0	
1218	0	55	45	0	0	0	
1219	0	100	0	0	0	0	
1220	0	100	0	0	0	0	
1221	0	0	100	0	0	0	
1222	0	100	0	0	0	0	
1223	30	20	40	10	0	0	
1224	0	100	0	0	0	0	
1225	30	20	40	10	0	0	
1226	0	100	0	0	0	0	
1227	0	100	0	0	0	0	01
1228	0	30	50	20	0	0	01
1229							
1230							
1231							
1232							
1233	18.1965881	64.3379366	5.36149472	12.1039805			
1234	0	100	0	0			
1235	0	100	0	0			
1236	0	80	0	20			
1237	0	100	0	0			
1238	0	100	0	0			
1239	0	98	0	2			
1240	0	0	0	100			
1241	0	0	0	100			
1242	0	100	0	0			
1243	0	100	0	0			
1244	100	0	0	0			
1245	0	0	0	100			
1246	0	0	0	100			
1247	0	100	0	0			
1248	0	100	0	0			
END	END	END	END	END	END	END	END

Table 40 – Capital Investment Monitoring (CIM)

Refer to chapter 30 for detailed commentary.

- The data reported in this table reconciles to the other AIR Tables.
- The table has been populated following the column definitions.
- Capitalised Salaries have been allocated by examining each of the 3 main investment areas as follows:
  - Capital works Programme
  - Management and General
  - Operations Capital

  The total Capitalised Salaries and overheads were pro-rated against each project on the CIM to arrive at a Salaries and overheads allocation for the single line on the CIM (Table 40) using the same method as applied in AIR 15.
- The variance between Table 40 (Q4 CIM) and other associated AIR tables is reported in Chapter 30. The main reason for variance is on complex projects which contain a blend of infra and non infra as well as a blend of purpose allocations which does not allow for creating a robust 16 component summary. The AIR tables' data is more reliable than table 40 for accuracy.

Total Asset Additions reconciliations

- Total asset additions – Water Service – Check to Table 25 line 5 col 4.
  For AIR 16 the reported numbers in these two tables are as follows:
  Table 25 – £48.762m
  Table 36 – £48.289m

The difference in the above two figures are explained as follows:

a) PPP Alpha Capital maintenance of [redacted] is not included in Table 36
b) £27k included in Table 25 relates to Decapitalised projects in 2016/17

- Total asset additions – Sewerage Service – Check to Table 25 line 5 Col 8.
  For AIR 16 the reported numbers in these two tables are as follows:
  Table 25 – £111.477m
  Table 36 – £108.188m

The difference in the above two figures is explained as follows:

c) PPP Omega [redacted] and PPP Kinnegar [redacted] residual asset additions were not included in Table 36.
d) £357k included in Table 25 relates to Decapitalised projects in 2016/17

Note: NI Water has complied with the column definitions in respect of the baseline and current actual or projected milestone dates in Table 40. The milestones dates are relevant, sequential and relate to the PC15 outputs.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 40A
NOMINATED OUTPUTS DELIVERED BY PC15 CAPITAL PROJECTS AND PROGRAMMES OF WORK

A								B																	
Project Information								Project Outputs																	
Project ID Reference	Project Name	PC13 Programme	Quality Regulator Date (if appropriate)	BU Date per FD (if appropriate)	BU Date per 15/16 MP (if appropriate)	BU Date per 16/17 MP (if appropriate)	Projected BU Date per AIR17 (if appropriate)	PC13 Output Ref Code	Output Units	PC10			PC13 in PC15FD		PC15 FD Baseline						PC13 Actual		PC15 Current Actual/ Forecast					
PI Project ID	PI Project Name	PI PC13 Prog								2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1	2	3	4		5			6	7	8	9	10	11	12	13	14	15	16	17	18	11	12	13	14	15	16	17	18
	Water Treatment Base Maintenance																											
JA271	Killylane WTW	1			31/12/2014			7	nr					1								1						
	Water Treatment Works																											
JN390	Lough Bradan WTWs Upgrade	4			02/03/2011			7	nr	1																		
JL723	Carmoney Water Treatment Works Upgrade	4			30/03/2011			7	nr	1																		
JP669	Killyhevlin WTW - Enforcement Order	4			31/03/2015			7	nr					1								1						
JR463	Dorisland WTW GAC plant	4			27/03/2015			7	nr					1								1						
JI052	Glenhordial Treatability	4		30/09/2015	29/01/2016	29/01/2016		7	nr						1								1					
JI052	Dorisland Treatability	4		31/12/2020	n/a		31/03/2020	7												1							1	
JI052	Killyhelvin Treatability	4		31/12/2020	n/a		31/03/2020	7												1							1	
JL772	Caugh Hill Treatability	4		31/01/2019	n/a		31/03/2020	7										1									1	
	Trunk Mains																											
JR416	CTM Extension - Barnetts Park to Purdysburn	5			29/11/2010			6	nr	1																		
JG036	Castor Bay to Dungannon Strategic Trunk Mains	5			24/05/2011			6	nr	1																		
JG035	Ballydougan to Newry Main Link Reinforcement Phase 1	5			04/12/2012			6	nr			1																
JG035	Ballydougan to Newry TM - Phase 2A	5			17/12/2012			6	nr			1																
JR460	Gravity II McVeighs Well to Oldpark SR	5			30/11/2014			6	nr					1								1						
JG035	Ballydougan to Newry TM - Phase 2B	5		28/08/2015	31/03/2016	31/03/2016		6	nr						1								1					
JR342	Castor Bay to Belfast TM	5		27/03/2015	08/05/2015	08/05/2015		6	nr					1									1					
JB693	Carland to Cookstown Trunkmain	5		31/03/2021	n/a	31/03/2017	21/09/2016	6												1				1				
JL715	Carmoney to Strabane Strategic Link Watermain	5		31/01/2019	n/a		31/01/2020	6										1									1	
	Service Reservoirs																											
JB665	Tullaghans SR, Dunloy, New Reservoir	6			13/08/2010			8	nr	1																		
JC381	Altnahinch WTP, Ballymoney, New CWB.	6			10/11/2010			8	nr	1																		
JC378	Glenlough SR, Ballymoney, New SR	6			20/12/2010			8	nr	1																		
JR151	West Belfast/ North Lisburn (Crew Hill)	6			18/01/2011			8	nr	1																		
JB648	Dungonnell Command Service Reservoir	6			31/03/2011			8	nr	1																		
JF583	Carland Service Reservoir	6			11/04/2011			8	nr		1																	
JS179	Ballykine Gravity Distribution	6			20/04/2011			8	nr		1																	
JV827	Tullyhappy SR	6			09/12/2011			8	nr		1																	
JB649	Tully SR	6			06/12/2012			8	nr			1																
JV830	Crieve SR	6			27/03/2015			8	nr					1								1						
JS274	Drumaroad WTW Clear Water Tank	6		31/03/2021	n/a			8												1								1
JP631	Killyhelvin Clear Water Tank	6		30/09/2017	n/a	29/03/2019		8									1								0	1		
JB709	Lough Fea CWB	6		30/09/2019	n/a			8											1								1	
	Monaclogh SR (additional output in 16/17 draft adjusted outputs submission)	6		n/a	n/a		01/08/2017	8																	1			
	Major Incident Mitigation Water Main Projects																											
JI024	MIMP West (Major Incident Mitigation Project West Region) Freeze Thaw Improvements	8			14/02/2014			15	nr				1								1							
JI025	MIMP South (Major Incident Mitigation Project West Region) Freeze Thaw Improvements	8			24/01/2014			15	nr				1								1							
JI027	MIMP Central (Major Incident Mitigation Project Central Region) Freeze Thaw Improvements	8			28/03/2014			15	nr					1							1							
JI028	MIMP East (Major Incident Mitigation Project East Region) Freeze Thaw Improvements	8			09/02/2015			15	nr				1									1						
JI026	MIMP North (Major Incident Mitigation Project North Region) Freeze Thaw Improvements	8			18/08/2014			15	nr					1								1						
	Unsatisfactory Intermittent Discharges																											
KR403	Whitehouse DAP Phase 1	11			13/04/2010			12	nr	3																		
KR402	Joymount WWPS	11			01/06/2010			12	nr	1																		
KR400	Lukes Point DAP Phase 1	11			23/06/2010			12	nr	1																		
KL450	Londonderry DAP : Strathfoyle & Drmahoe Work Package : Caw WWPS	11			01/07/2010			12	nr	1																		
KB428	Draperstown DAP	11			02/07/2010			12	nr	2																		
KG153	Gilford Road, Portadown, Sewerage Upgrades	11			10/08/2010			12	nr	3																		
KL449	Londonderry DAP : Strathfoyle & Drmahoe Work Package : Drumahoe Old WWPS	11			02/09/2010			12	nr	1																		
KR440	Ballywalter DAP Phase 1	11			30/09/2010			12	nr	1																		
KL445	Londonderry DAP: Victoria road Work Package - UID's	11			11/10/2010			12	nr	1		1																
KL448	Londonderry DAP : Victoria Road Work Package : CSO Rationalisation	11			29/10/2010			12	nr	3																		
KL428	Londonderry Sewer Imps Stage 2 - Duke St PS Group Schemes - UID's	11			28/03/2011			12	nr	3																		
KR441	Montgomery Rd, Flood Alleviation - UID's	11			27/04/2012			12	nr		4																	
KS807	Kilkeel Harbour SPS and Sewerage Improvements - UID's	12			04/06/2012			12	nr			2																
KS379	Murlough SPS Upgrade & Network Improvements - UID's	12			29/04/2011			12	nr		8	1																
KR452	Baroda Street/Ormeau Park, Belfast CSO	12			07/09/2011			12	nr		2																	
KT138	Beechlawn SPS Hillsborough Upgrade - UID's	12			30/11/2011			12	nr		1																	
KL443	Londonderry DAP Duke Street Work Package - UID's	12			02/12/2011			12	nr		4																	
KR432	Beechmount Avenue/Gortfin Street Belfast Hydraulic Upgrade. - UID's	12			02/12/2011			12	nr		4																	
KL444	Londonderry DAP, Buncrana Road, Work Package Stage 1- UID's	12			07/05/2012			12	nr			2																
KL446	Londonderry DAP, Duke Street Work Package, Flood Alleviation	12			13/12/2011			12	nr		3																	
KS377	Downs Road/Castle Park Sewer Upgrade/ Attenuation - UID's	12			23/01/2012			12	nr		4																	
KC404	Coleraine DAP Phase 1 - UID's	12			31/01/2012			12	nr		5																	
KR434	Annadale Flats, Belast	12			30/03/2012			12	nr		4																	
KS878	Bangor DAP Work Package 7: WWPS - UID'S	12			28/03/2012			12	nr		3																	
KA201	Ballyeaston, Sewerage System Upgrade	12			23/04/2012			12	nr		1																	
KL447	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation - UID's	12			24/09/2012			12	nr			10																
KS373	Church Street, SPS Upgrade, Downpatrick - UID's	12			06/05/2013			12	nr																			
KS373	UID046 Meadowlands CSO3	12			06/05/2013			12	nr				1								1							
KS373	UID047 Church Street CSO1	12			06/05/2013			12	nr				1								1							
KS373	UID048 Scotch Street CSO4	12			06/05/2013			12	nr				1								1							
KS373	UID049 Scotch Street CSO11	12			06/05/2013			12	nr				1								1							
KS373	UID050 Rathkeltair Terr CSO12	12			06/05/2013			12	nr				1								1							
KS835	South Street Newtownards WWPS Refurbishment - UID'S	12			28/01/2013			12	nr			1																
KG184	Portadown Drainage Area Network Improvements - Obins Street and Park Road - UID's	12			31/08/2012			12	nr			4																
KR488	Linen Gardens Belfast CSO Screening - UID's	12			01/01/2014			12	nr				1								1							
KN595	Brookmount Road, Hunters Cresent, Omagh	12			31/05/2011			12	nr			5																
KS812	Greyabbey DAP Phase 1 - UID's	12			24/09/2012			12	nr			2																
KV014	Castlewellan DAP - UIDs	12			19/08/2010			12	nr			2																
KG178	Annaghanoon Road WWPS, Waringstown	12			05/09/2011			12	nr			1																
KL451	Londonderry DAP, Strathfoyle + Drumahoe Package: CSO Abandonments - UID's	12			24/09/2012			12	nr			3																
KR439	Millisle DAP 1	12			29/11/2012			12	nr			1																
KV063	Newry Rehab	12			05/09/2011			12	nr			1																
KV159	Water Street/Horners Lane Rostrevor	12			24/06/2011			12	nr			1																

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1	2	3	4		5			6	7	8	9	10	11	12	13	14	15	16	17	18	11	12	13	14	15	16	17	18
KN646	Winters Lane, CSO Upgrade - UID	12			27/03/2013			12	nr			1																
KT415	Glenmore WwPS Lisburn CSO upgrade	12						12	nr																			
KT415	UID065 Glenmore SPS CSO 22	12			25/06/2013			12	nr				1								1							
KS939	Central Promenade, Newcastle CSO Upgrade (Pattons Bridge)	12						12	nr																			
KS939	UID259 Pattons Bridge (Blackrock WwPS	12			31/03/2016	24/03/2016	24/03/2016	12	nr					1									1					
KV154	Newry Road SPS Warrenpoint - UID's	12						12	nr																			
KV154	UID095 Newry Road TPS CSO	12			14/01/2014			12	nr					1							1							
KV154	UID234 Drumsesk Road Header Tank CSO	12			14/01/2014			12	nr					1							1							
KS372	Market Street SPS Upgrade, Downpatrick - UID's	12						12	nr																			
KS372	UID044 Market Street SPS Upgrade, Downpatrick - UID's	12			18/12/2015	18/02/2016	18/02/2016	12	nr					1									1					
KF037	Annagher Sewage Pumping Station and Rising Main - UID's	12						12	nr																			
KF037	UID245 Annagher SPS	12			28/03/2014			12	nr				1								1							
KF037	UID246 Campbells Garage WwPS CSO	12			28/03/2014			12	nr				1								1							
KF037	UID247 Washing bay Road WwPS CSO	12			28/03/2014			12	nr				1								1							
KF037	UID359 Canal Quay WWPS (not required)	12			x			12	nr				1								x							
KV161	Castlewellan DAP Stage 1 - UIDs	12						12	nr																			
KV161	UID033 Mill Hill CSO 04	12			31/03/2014			12	nr				1								1							
KV161	UID031 Ballylough CSO 04	12			31/03/2014			12	nr				1								1							
KV161	UID036 Annesborough Park CSO 01	12			31/03/2014			12	nr				1								1							
KS937	Annesborough Park WWPS Upgrade	12						12	nr																			
KS937	UID032 Annesborough Park WwPS	12			31/10/2016	30/09/2016	30/06/2016	12	nr						1									1				
KT403	Drumbeg Drive, Lisburn WWPS Enhancement	12						12	nr																			
KT403	UID070 Maralin Ave CSO 02	12			30/09/2014			12	nr					1								1						
KS875	Bangor DAP Works Package 6: Lukes Point WWPS UIDs	12						12	nr																			
KS875	UID189 Bangor DAP Works Package 6: Lukes Point WWPS UIDs	12			30/09/2014			12	nr					1								1						
KT391	Lisburn DAP Stage 1 - UID's	12						12	nr																			
KT391	UID066 Waterside 2 CSO 07	12			12/03/2015			12	nr					1								1						
KT391	UID067 B Hilden PS CSO 13B	12			30/03/2015			12	nr					1								1						
KT391	UID068 Hilden PS CSO 13A	12		31/03/2015	30/10/2015	22/02/2016	15/10/2015	12	nr					1									1					
KT391	UID069 Antrim St CSO 25	12		22/02/2016	31/08/2016	30/10/2016	22/08/2016	12	nr						1									1				
KT391	UID072 New Holland WWT (not required)	12			01/01/2015			12	nr						1								x					
KT391	UID073 Duncans Rd CSO 15 (not required)	12			01/01/2015			12	nr						1								x					
KT391	UID074 Laws Yard CSO 14	12		22/02/2016	30/10/2015	22/02/2016	30/10/2015	12	nr						1								1					
KT391	UID221 Waterside 1 CSO 01	12			12/03/2015			12	nr					1								1						
KT391	UID222 Linenhall Street CSO 03	12			30/03/2015			12	nr						1							1						
KT391	UID223 Antrim Street CSO 05	12		22/02/2016	31/10/2016	20/09/2017	30/06/2019	12	nr						1												1	
KT391	UID224 Clonevin Park CSO 10	12		22/02/2016	09/09/2015	22/02/2016	09/09/2015	12	nr						1								1					
KT391	UID225 Sprucefield WWPS Screen CSO 20	12			30/03/2015			12	nr					1								1						
KT391	UID226 Antrim Road CSO 24 + flooding	12		22/02/2016	30/10/2015	22/02/2016	30/10/2015	12	nr						1								1					
KT391	UID227 Bow Street CSO 26	12		22/02/2016	30/10/2015	22/02/2016	22/03/2016	12	nr						1								1					
KT391	UID228 Ballynahinch Rd 2 CSO 27	12			18/03/2015			12	nr					1								1						
KT391	UID229 Grand Street Screen CSO 28	12		31/03/2015	30/10/2015	22/02/2016	20/11/2015	12	nr					1									1					
KT391	UID423 Eglantine WWPS CSO 16	12			30/03/2015			12	nr					0								1						
KT391	UID424 Culcavy WWPS CSO 17	12			30/03/2015			12	nr					0								1						
KT391	UID425 Ballinderry WWPS CSO 23	12			30/03/2015			12	nr					0								1						
KT391	UID421 Edgewater WWPS	12		31/03/2015	04/09/2015	22/02/2016	04/09/2015	12	nr					1									1					
KT391	UID422 Hoggs Weir CSO 04	12		n/a	30/10/2015	30/10/2015	30/10/2015	12	nr														1					
KS873	Bangor DAP Work Package 2: Rathmore Stream UIDs	12						12	nr																			
KS873	UID013 Westburn Cresc. CSO 3A	12		01/03/2015	31/03/2016	27/04/2017	31/03/2019	12	nr					1													1	
KS873	UID014 Crawfordsburn Rd CSO 03B	12		01/03/2015	29/04/2016	22/05/2017	31/03/2019	12	nr					1													1	
KS873	UID015 Crawfordsburn Rd CSO 03C	12		01/03/2015	29/04/2016	09/05/2017	31/03/2019	12	nr					1													1	
KR480	Holywood Sewer Catchment Investigations - UIDs	12						12	nr																			
KR480	UID218 Palace Barracks CSO 110	12		31/12/2015	29/06/2016	30/11/2016	07/09/2016	12	nr						1									1				
KR480	UID219 Jackson Road CSO 52	12			06/10/2014			12	nr					1								1						
KR640	Holywood Sewer Network Improvements- Phase 2	12						12	nr																			
KR640	UID220 Strathearn Court CSO 53	12		31/12/2015	29/06/2016	31/10/2017	20/12/2016	12	nr						1									1				
KS930	Millisle DAP Stage 2 Phase 2	12						12	nr																			
KS930	UID076 Millisle SPS CSO 02	12		18/01/2016	31/03/2016	30/03/2017	12/12/2018	12	nr						1												1	
KR417	Ormeau Avenue Sewer investigation and feasibility study for pollution resolution - UID's	12						12	nr																			
KR417	UID191 Cromac Street CSO 95	12		31/03/2017	30/06/2016	31/06/2018	31/03/2020	12	nr							1												1
KR417	UID192 Outside Holiday Inn CSO97	12		31/03/2017	30/06/2016	31/06/2018	31/03/2020	12	nr							1												1
KR417	UID193 Dublin Road Cinema CSO 96	12		31/03/2017	30/06/2016	31/06/2018	31/03/2020	12	nr							1												1
KR417	UID194 Bankmore Street / Dublin Road CSO 81	12		31/03/2017	30/06/2016	31/06/2018	31/03/2020	12	nr							1												1
KR417	UID265 Sandy Row CSO 94	12		31/03/2017	30/06/2016	31/06/2018	31/03/2020	12	nr							1												1
KG183	Portadown Drainage Area Network Improvements - Meadow Lane and Bann Street - UID's	12						12	nr																			
KG183	UID081 Meadow Lane CSO 06	12		30/09/2017	27/03/2017	04/05/2018	31/03/2020	12	nr								1											1
KG183	UID082 Meadow Lane CSO 07	12		31/03/2017	27/03/2017	25/05/2018	31/03/2020	12	nr							1												1
KG183	UID083 Portmore Street CSO 08	12		30/09/2017	27/03/2017	28/09/2018	31/03/2020	12	nr								1											1
KG183	UID085 Clonavon Avenue CSO 11	12		30/09/2017	27/03/2017	28/09/2018	31/03/2020	12	nr								1											1
KG183	UID233 Meadow Lane WWPS CSO 32	12		31/03/2017	27/03/2017	06/04/2018	31/03/2020	12	nr							1												1
KG183	UID086 Meadow Lane CSO 12	12		30/09/2017	27/03/2017	06/04/2018	31/03/2020	12	nr								1											1
KF330	Armagh DAP Stage 1 - UID's	12						12	nr																			
KF330	UID001 Scotch Street CSO. 2	12		31/03/2016	22/02/2016	31/03/2016	25/03/2016	12	nr						1								1					
KF330	UID002 Scotch Street. CSO 1	12		31/03/2016	18/12/2015	31/03/2016	25/03/2016	12	nr						1								1					
KF330	UID003 Courthouse 1 CSO	12		31/03/2015	30/11/2015	31/03/2016	30/11/2015	12	nr					1									1					
KF330	UID005 The Mall East CSO	12		31/03/2016	31/05/2016	31/03/2017	14/10/2016	12	nr						1									1				
KF330	UID006 English St CSO. Scheme 2	12		31/03/2015	31/07/2016	10/03/2017	21/01/2017	12	nr					1										1				
KF330	UID007 Drumcairn SPS. Scheme 3	12		31/03/2015	30/03/2015			12	nr					1								1						
KF330	UID431 Ballycrummy WWPS	12			30/03/2015			12	nr					0								1						
KF330	UID430 Longstone WWPS	12			30/03/2015			12	nr					0								1						
KF330	UID010 Newry Road SPS	12		31/03/2016	29/04/2016	31/03/2017	28/04/2017	12	nr						1										1			
KF330	UID173 Mall West CSO	12		31/03/2016	30/11/2015	31/03/2016	23/03/2016	12	nr						1									1				
KF330	UID175 Alexender Road CSO	12		31/03/2015	13/11/2015	31/03/2016	13/11/2015	12	nr					1										1				
KF330	UID176 Gillis Lane CSO	12		31/03/2015	30/03/2015			12	nr					1								1						
KF396	UID008 Milford SPS	12		31/03/2015	30/03/2018	30/04/2019		12	nr					1														1
KF397	UID009 Killylea SPS	12		31/03/2015	30/03/2018	30/03/2020		12	nr					1														1
KS879	Bangor DAP Work Package 4: Bangor Marina UIDs	12						12	nr																			
KS879	UID018 Somerset Ave. CSO 11	12			27/08/2014			12	nr					1								1						
KS879	UID019 Bridge St CSO 13	12			27/08/2014			12	nr					1								1						
KS879	UID020 Quay St CSO 14	12			27/08/2014			12	nr					1								1						
KS879	UID021 Tennyson CSO 10	12			27/08/2014			12	nr					1								1						

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1	2	3	4		5			6	7	8	9	10	11	12	13	14	15	16	17	18	11	12	13	14	15	16	17	18
KS879	UID022 Queens parade CSO 12	12			27/08/2014			12	nr					1								1						
KS877	Bangor DAP Works Package 5 - Clandeboye Stream UIDs	12						12	nr																			
KS877	UID023 Castle Park CSO 07	12		31/12/2015	27/10/2016	29/01/2018	31/03/2018	12	nr						1										1			
KS877	UID179 13 Rugby Avenue CS0 8A	12		31/03/2015	27/10/2016	29/01/2018	31/03/2018	12	nr					1											1			
KS877	UID180 11 Brunswick Road CSO 8B	12		31/03/2015	27/10/2016	29/01/2018	31/03/2018	12	nr						1										1			
KS877	UID181 104 Abbey Street CSO 8F	12		31/12/2015	27/10/2016	29/01/2018	31/03/2018	12	nr						1										1			
KS877	UID182 114 Abbey Street CSO 8E	12		31/12/2015	27/10/2016	29/01/2018	31/03/2018	12	nr						1										1			
KS877	UID183 Railway View Street CSO 8G (not required)	12		31/03/2015	27/10/2016	29/01/2018	31/03/2018	12	nr					1											x			
KS877	UID184 Abbey Park CSO 9	12		31/12/2015	27/10/2016	29/01/2018	31/03/2018	12	nr						1										1			
KS877	UID263 57 Belfast Road CSO 8C	12		31/03/2015	27/10/2016	29/01/2018	21/03/2017	12	nr					1									1					
KS877	UID264 17 Belfast CSO 8D	12		31/03/2015	27/10/2016	29/01/2018	21/03/2017	12	nr					1									1					
KS958	Bangor DAP Works Package 5 Clandeboye Stream UIDs Phase 2	12						12	nr																			
KS958	UID185 Avonlea Park CSO 6	12		31/03/2015	30/10/2015	31/03/2016	30/03/2016	12	nr					1									1					
KS958	UID186 Rosemary Crescent / Inglewood Pk CSO 5	12		31/03/2015	30/10/2015	31/03/2016	30/03/2016	12	nr					1									1					
KS958	UID187 Clandeboye Road CSO 5B	12		31/03/2015	30/10/2015	31/03/2016	30/03/2016	12	nr					1									1					
KS902	Dundrum DAP, UID Upgrades - UID's	12						12	nr																			
KS902	UID237 Parochial House CSO 02	12		31/12/2016	21/08/2017	29/06/2018	31/03/2020	12	nr							1											1	
KS902	UID238 Main Street CSO 04	12		31/12/2016	21/08/2017	29/06/2018	31/03/2020	12	nr							1											1	
KS902	UID239 Flynn's WWPS CSO 05	12		31/12/2016	21/08/2017	05/04/2019		12	nr							1											1	
KT114	Hillsborough WWTW	16						12	nr																			
KT114	UID071 Magherageery PS CSO 18	16			18/03/2014			12	nr				1								1							
KS848	Newcastle WwTW	16						12	nr																			
KS848	UID 260 Harbour WwPS	16			09/12/2013			12	nr				1								1							
KR501	Carrickfergus WWTW Upgrade	2						12	nr																			
KR501	UID272 Carrickfergus CSO	2			19/03/2015			12	nr					1								1						
KL468	Strathfoyle, Londonderry Syphon Inlet Screen	12						12	nr																			
KL468	UID114 Caw Park CSO 023	12		23/05/2014	31/03/2016	31/03/2016	21/03/2016	12	nr					1									1					
KL468	UID380 Gransha Park WwPS No. 2	12		23/05/2014	31/03/2016	31/03/2016	22/03/2016	12	nr					1									1					
KC415	Coleraine	12						12	nr																			
KC415	UID043 Screen Road CSO	12		31/03/2016	30/03/2015			12	nr						1							1						
KC415	UID040 Ballysally CSO	12		31/03/2016	30/11/2016	31/03/2017	31/03/2018	12	nr						1										1			
KA248	Ballygally Sewer Rehabilitation	12						12	nr																			
KA248	UID190 Brustin Lee WWPS	12			30/03/2015			12	nr					1								1						
KA248	UID319 Croft Manor WWPS	12			30/03/2015			12	nr					1								1						
KA248	UID320 Ballygalley Slipway WWPS	12			30/03/2015			12	nr					1								1						
KA248	UID321 Ballygalley North WWPS	12			30/03/2015			12	nr					1								1						
KA248	UID322 Ballygalley Coast Road CSO	12			30/03/2015			12	nr					1								1						
KI488	Removal of Inlet Screens and Installation of Solid Handling Pumps	02						12	nr																			
KI488	UID400 Braeside WWPS	02			01/08/2013			12	nr				1								1							
KI488	UID401 Cloughy Road WWPS	02			01/09/2013			12	nr					1							1							
KI488	UID402 Old Mill Race WWPS	02			01/08/2013			12	nr				1								1							
KI488	UID403 Glen Park WWPS	02			01/09/2013			12	nr				1								1							
KI488	UID404 Kerries Glen	02			01/01/2014			12	nr				1								1							
KI488	UID405 Carnesure Terrace WWPS	02			01/04/2014			12	nr					1								1						
KI488	UID406 Hillside WWPS	02			01/10/2013			12	nr				1								1							
KI488	UID407 Chimera Wood WWPS	02			01/12/2013			12	nr				1								1							
KI488	UID408 Ballystockart WWPS	02			01/11/2014			12	nr					1								1						
KI488	UID409 Milltown WWPS	02			01/10/2014			12	nr					1								1						
KI488	UID419 Ratalla WWPS	02			01/04/2013			12	nr					1							1							
KS374	Hunter's Mill Storm Attenuation and Network Improvements	12						12	nr																			
KS374	UID045 Downpatrick - Stream St CSO	12			19/02/2015			12	nr					1								1						
KS374	UID124 Hunters Mill Attenuation Stream Street CSO2	12			19/02/2015			12	nr					1								1						
KA251	Umry Lodge CSO	12						12	nr																			
KA251	UID394 Clotworthy House CSO	12			22/01/2014			12	nr				1								1							
KT139	River Road SPS Upgrade	02						12	nr																			
KT139	UID276 River Road WWPS	02			09/04/2014			12	nr					1								1						
KS867	Copeland Road, Comber, Tank Sewer	12						12	nr																			
KS867	UID343 Copeland Road CSO 61	12			30/10/2014			12	nr					1								1						
KA252	Glynn WWPS	02						12	nr																			
KA252	UID398 Glynn WWPS	02			19/02/2015			12	nr					1								1						
KS900	WwPS Upgrades at Groomsport, Killinchy & Craigavad	12						12	nr																			
KS900	UID410 Glencraig WWPS	12			01/05/2014			12	nr				0									1						
KF354	Dernagh WWPS Upgrade	02						12	nr																			
KF354	UID416 Dernagh WWPS	02			01/09/2014			12	nr					1								1						
KN644	Greenbridge WWPS Upgrade	02						12	nr																			
KN644	UID417 Greenbridge WWPS	02			14/11/2013			12	nr				1								1							
KF360	Blackwater Town WWPS Upgrade	02						12	nr																			
KF360	UID418 Blackwatertown WWPS	02			31/03/2014			12	nr				1								1							
KN628	Carrickmore WWPS Upgrade	02						12	nr																			
KN628	UID427 Carrickmore WWPS	02			27/08/2014			12	nr					0								1						
KL504	Londonderry DAP : Buncrana Road Work Package, Stage 2	12						12	nr																			
KL504	UID273 Knockalla New WWPS	12		31/03/2015	29/02/2016	31/08/2016	13/09/2016	12	nr					1										1				
KL504	UID274 Upper Galliagh Road WWPS	12		31/03/2015	31/03/2016	31/03/2016	31/03/2016	12	nr					1									1					
KL504	UID275 Glen Road CSO	12		31/03/2015	24/04/2015	24/04/2015	24/04/2015	12	nr					1									1					
KL504	UID433 Fairview Knockalla CSO	12		n/a		21/03/2016	21/03/2016	12	nr														1					
KS872	Bangor DAP Work Package 1	12						12	nr																			
KS872	UID011 Carnalea Golf Club CSO 1	12		30/09/2018	30/07/2018	31/03/2019	31/03/2019	12	nr									1									1	
KS872	UID012 KillaneyWWPS 3	12		30/09/2018	30/07/2018	31/03/2019	31/03/2019	12	nr									1									1	
KS872	UID177 Killaire WWPS 1	12		30/09/2018	30/07/2018	31/03/2016	31/03/2016	12	nr									1					1					
KS874	Bangor DAP Works Package 3	12						12	nr																			
KS874	UID016 Maxwell CSO 4	12		30/09/2016	03/06/2019	29/03/2019	29/03/2019	12	nr							1											1	
KS874	UID017 Stricklands Glen WWPS	12		30/09/2016	03/06/2019	29/03/2019	29/03/2019	12	nr							1											1	
KS874	UID178 Brompton Road SPS (PS06)	12		30/09/2016	03/06/2019	29/03/2019	29/03/2019	12	nr							1											1	
KG177	Portadown DAP Stage 2	12						12	nr																			
KG177	UID090 Annagh Catchment CSO 20	12		31/12/2018	04/12/2017	30/09/2020	31/03/2022	12	nr									1									x	
KG177	UID091 Annagh SPS CSO 20	12		31/12/2018	04/12/2017	03/04/2020	31/03/2022	12	nr									1									x	
KG177	UID092 Chambers Park CSO 01	12		31/12/2018	04/12/2017			12	nr									1									x	
KG177	UID093 Ballynacor CSO21	12		31/12/2018	04/12/2017	03/04/2020	31/03/2022	12	nr									1									x	
KR489	Glenmachan Strategic Project Phase 1a	12						12	nr																			
KR489	UID411 Balmoral Avenue CSO63	12		31/03/2016	19/06/2017			12	nr						1								x					
KR489	UID412 Balmoral Court CSO54	12		31/03/2016	19/06/2017			12	nr						1								x					

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Project Information								Project Outputs															
Project ID Reference	Project Name	PC13 Programme	Quality Regulator Date (if appropriate)	BU Date per FD (if appropriate)	BU Date per 15/16 MP (if appropriate)	BU Date per 16/17 MP (if appropriate)	Projected BU Date per AIR17 (if appropriate)	PC13 Output Ref Code	Output Units	PC10			PC13 in PC15FD		PC15 FD Baseline							PC13 Actual		PC15 Current Actual/ Forecast					
PI Project ID	PI Project Name	PI PC13 Prog								2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1	2	3	4		5			6	7	8	9	10	11	12	13	14	15	16	17	18	11	12	13	14	15	16	17	18
KR489	UID413 Lisburn Road Golf Club CSO58	12		31/03/2017	19/06/2017			12	nr							1								x				
KR489	UID414 Park Royal CSO57	12		31/03/2017	19/06/2017			12	nr							1								x				
KR489	UID415 Priory Park CSO55	12		30/09/2017	19/06/2017	30/09/2017		12	nr								1											x
KR504	Portaferry Road, N,Ards WWPS Upgrade	12						12	nr																			
KR504	UID351 Portaferry Road WWPS	12		31/03/2019	31/03/2017	31/08/2017	31/03/2019	12	nr									1								1		
KB486	Galgorm WWPS Upgrade	12						12	nr																			
KB486	UID399 Galgorm Raphael WWPS	12		30/09/2016	31/03/2017	20/03/2018	20/03/2018	12	nr							1									1			
KS903	Annalong DAP	12						12	nr																			
KS903	UID266 Halfway House CSO	12		n/a	31/03/2016	21/03/2016	21/03/2016	12	nr														1					
KS903	UID267 Marine Park CSO	12		n/a	31/03/2016	21/03/2016	21/03/2016	12	nr														1					
KL527	Manorwood WWPS Replacement	12						12	nr																			
KL527	UID432 Manorwood WWPS	12				31/10/2016	01/12/2016	12	nr															1				
KL524	Bleachgreen WWPS, Londonderry, Upgrade/Replacement	12						12	nr																			
KL524	UID420 Bleachgreen WWPS	12				30/04/2017	31/03/2019	12	nr																	1		
KA260	Muckamore WWPS Upgrade	12						12	nr																			
KA260	UID389 Muckamore WwPS	12				15/03/2017	04/04/2017	12	nr																1			
KA261	Milltown Road WWPS Upgrade	12						12	nr																			
KA261	UID388 Milltown Road WWPS Upgrade	12					21/03/2017	12	nr															1				
KA247	Crumlin Town WWPS Upgrade	12						12	nr																			
KA247	UID387 Crumlin Town WWPS Upgrade	12					01/03/2020	12	nr																		1	
KA262	Islandreagh WWPS Upgrade	12						12	nr																			
KA262	UID391 Islandreagh WWPS Upgrade	12					30/03/2019	12	nr																	1		
KA263	Dunadry WWPS Upgrade	12						12	nr																			
KA263	UID390 Dunadry WWPS Upgrade	12					30/03/2019	12	nr																	1		
	Wastewater Treatment Works																											
KT102	Dunmurry WwTW Modifications	15			19/03/2012			13	nr		1																	
KB436	Whitehead, Ballystruder & Ballycarry Rationalisation	15			16/02/2012			13	nr		1																	
KR389	Ballyhalbert WwTW Interim Solution	15			28/03/2013			13	nr			1																
KA195	Mullaghboy WWTW	15			04/04/2011			13	nr		1																	
KR391	Portavogie WwTW Interim Solution	15			24/09/2012			13	nr			1																
KS253	Drumaness WwTW	15			31/08/2010			13	nr	1																		
KB282	Magherafelt WwTW	15			28/03/2011			13	nr	1																		
KT125	Hook's Corner WwTW	15			28/03/2011			13	nr	1																		
KL393	Ballymonie WwTW	15			18/03/2011			13	nr	1																		
KB269	Toome (Creagh) Sewerage Scheme	15			22/03/2011			13	nr	1																		
KS307	Loughries WWTW	15			25/01/2011			13	nr	1																		
KB281	Maghera WwTW	15			03/02/2011			13	nr	1																		
KL363	Feeny WwTW	15			25/11/2011			13	nr		1																	
KR310	Newtownbreda WwTW	15			04/02/2011			13	nr	1																		
KG145	Derrytrasna WwTW Upgrade	15			29/11/2010			13	nr	1																		
KB333	Cargan WwTW	15			30/11/2010			13	nr	1																		
KC284	Cloughmills WwTW	15			30/11/2010			13	nr	1																		
KB322	Martinstown WwTW	15			13/12/2010			13	nr	1																		
KF005	Coalisland WwTW	15			01/12/2010			13	nr	1																		
KC299	Bushmills + Portballintrae WwTW	15			06/12/2010			13	nr	1																		
KB279	Stewartstown WwTW Improvements	15			10/11/2010			13	nr	1																		
KB284	Coagh WwTW Improvements	15			10/11/2010			13	nr	1																		
KL300	Dungiven WwTW	15			10/11/2010			13	nr	1																		
KV064	Lurganare WwTW	15			30/09/2010			13	nr	1																		
KN533	Rousky Sewerage Scheme	15			09/09/2010			13	nr	1													0					
KB278	Moneymore STW Imps	15			18/08/2010			13	nr	1																		
KS224	Downpatrick WwTW	15			14/12/2009			13	nr	1																		
KF319	Annaghmore WwTWs	15			27/09/2010			13	nr	1																		
KS225	Ardglass WWTW	15			20/03/2015			13	nr					1									1					
KT377	New Holland WwTW	16			28/03/2011			13	nr	1																		
KS374	Darragh Cross WwTW	16			07/09/2010			13	nr	1																		
KC338	Causeway/Aird (New Pumping Station)	16			23/08/2011			13	nr		1																	
KC416	Glenstall WwTW - Nutrient Reduction	16			25/02/2013			13	nr			1																
KN622	Omagh WwTW - Nutrient Reduction	16			25/02/2013			13	nr			1																
KL465	Limavady WwTW - Nutrient Reduction	16			25/02/2013			13	nr			1																
KF329	Ardress WWPS Upgrade	16			31/03/2012			13	nr		1																	
KS857	Glassdrumman WWTW	16			23/12/2011			13	nr		1																	
KS216	Dunmore Sewerage - EC Compliance	16			30/06/2011			13	nr		1																	
KF320	Bush WwTW	16			03/06/2010			13	nr	1																		
KF028	Keady Wwtw	16			29/11/2012			13	nr			1																
KL482	Tamnaherin Wwtw	16			28/01/2013			13	nr			1																
KV105	Newry WwTW Extension Phase 1	16			28/01/2013			13	nr			1																
KF060	Brockagh Terrace/Mountjoy WtWT	16			13/08/2012			13	nr			1																
KV125	Forkhill WwTW	16			28/03/2013			13	nr			1																
KV045	Mullaghbane WwTW	16			28/03/2013			13	nr			1																
KB287	Swatragh WwTW	16			21/03/2013			13	nr			1																
KB314	Gulladuff WwTW	16			16/12/2013			13	nr				1										1					
KT114	Hillsborough WWTW	16			18/03/2014			13	nr				1										1					
KS848	Newcastle WwTW	16			09/12/2013			13	nr				1										1					
KR501	Carrickfergus WWTW Upgrade	2			31/03/2014			13	nr				1										1					
KR530	Belfast WwTW Base Maintenance Phase 2	2			18/03/2014			13	nr					1									1					
KN631	Strabane WWTW's Refurbishment	2			20/12/2013			13	nr				1										1					
KL350	Benone Area Sewerage	16			16/09/2013			13	nr																			
KL350	Decommission Benone WwTW & construct WwPS	16			16/09/2013			13	nr				1										1					
KL350	Decommission Drumavelly WwTW & construct WwPS	16			16/09/2013			13	nr				1										1					
KL350	Decommission Aughil WwTW & construct WwPS	16			16/09/2013			13	nr				1										1					
KL350	Decommission MoD WwTW & construct WwPS	16			16/09/2013			13	nr				1										1					
KL350	Decommission NIPS WwTW & construct WwPS	16			16/09/2013			13	nr				1										1					
KL350	Provision of new Magilligan WwTW	16			16/09/2013			13	nr				1										1					
KP672	Tempo WwTW	16			06/01/2015			13	nr					1										1				
KS844	Ballyhornan Outfall - NIEA Enforcement	16			31/12/2013			13	nr				1										1					
KL424	Magheramason Wwtw	16			20/03/2015			13	nr					1										1				
KR409	Moneyreagh WwTW (Storm Pumping station)	16			12/12/2013			13	nr				1										1					
KP586	Clabby Wwtw	16		30/09/2015	31/03/2017	31/03/2017	30/03/2018	13	nr							1										1		
KN599	Donaghmore Wwtw	16			19/03/2015			13	nr					1										1				
KL487	Nixon's Corner	16			30/01/2015			13	nr					1										1				
KL386	Gortnahey Wwtw	16			24/07/2014			13	nr					1										1				

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Project Information								Project Outputs																					
Project ID Reference	Project Name	PC13 Programme	Quality Regulator Date (if appropriate)	BU Date per FD (if appropriate)	BU Date per 15/16 MP (if appropriate)	BU Date per 16/17 MP (if appropriate)	Projected BU Date per AIR17 (if appropriate)	PC13 Output Ref Code	Output Units	PC10			PC13 in PC15FD		PC15 FD Baseline							PC13 Actual		PC15 Current Actual/ Forecast					
PI Project ID	PI Project Name	PI PC13 Prog								2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
1	2	3	4		5			6	7	8	9	10	11	12	13	14	15	16	17	18	11	12	13	14	15	16	17	18
KS389	Ballymartin & Blackrock WwTWs	16						13	nr																			
KS389	Ballymartin WwTW	16			31/03/2015			13	nr						0							1					
KS389	Blackrock WwTW	16		31/03/2016	31/03/2016	30/06/2016	20/10/2016	13	nr						1									1				
KS355	Ballynahinch Wwtw	16			21/03/2014			13	nr				1								1							
KS905	Kilmore & Annacloy WwTW	16						13	nr																			
KS906	Kilmore WwTW	16			10/03/2015			13	nr					1								1						
KS907	Annacloy WwTW	16			11/03/2015			13	nr						1							1						
KS887	Ards South (Ballycranbeg WwTW load reduction)	16			31/03/2015			13	nr					1								1						
KL496	Feeny WwTW - Replacement Secondary Treatment	16			08/08/2014			13	nr				1									1						
KF346	Robinsonstown WwTW	16		01/01/2020	30/06/2019	31/03/2018	31/03/2021	13	nr										1									1
KN596	Ballymagory WWTW	16			30/03/2015			13	nr					1								1						
KL493	Artigarvin WwTW	16		31/03/2015	21/12/2015	21/12/2015		13	nr					1									1					
KN640	Dromore (Tyrone) WWTW	16			20/03/2015			13	nr					1								1						
KT402	Dunmurry WWTW Sludge Facility	16			18/03/2014			13	nr				1								1							
KB459	Maghera WwTW: Phase 2	16			04/02/2014			13	nr				1								1							
KL394	Drumsurn Wwtw	16			16/12/2014			13	nr					1								1						
KP668	Lisnarrick Wwtw	16			01/12/2014			13	nr					1								1						
KT126	Stoneyford Wwtw	16			28/11/2014			13	nr					1								1						
KI508	UWWTR MCERT compliance	16		31/03/2016	31/01/2016	31/01/2016		13	nr					1	1								1					
KC296	Ballycastle WwTW	16		01/01/2017	30/12/2017	31/03/2018	31/12/2017	13	nr							1									1			
KN656	Castle Archdale WwTW	16		31/03/2015	30/03/2016	30/03/2016		13	nr					1									1					
KG202	Aghagallon WwTW	16			31/03/2015			13	nr					1								1						
	Waringsford	16			30/09/2014			13	nr					0								1						
KC302	Ballintoy WwTW	16		31/03/2018	31/01/2017	31/01/2018	29/03/2019	13									1								0	1		
KS235	Ballygowan/Moneyreagh WwTW	16						13																				
KS235	Ballygowan WwTW	16		31/03/2018	28/02/2017		31/03/2019	13									1								0	1		
KS235	Moneyreagh WwTW	16		31/03/2018	28/02/2017		31/03/2019	13									1								0	1		
KS111	Ards South - Cloughey	16		31/03/2017	n/a	31/03/2019	31/12/2018	13								1										1		
KL489	Ballykelly WwTW	16		31/03/2017	n/a	30/10/2018	31/10/2018	13								1										1		
	Dundrum WwTW	16		31/12/2017	n/a		31/03/2018	13									1								1			
KS113	Ards North - Carrowdore, Ballywalter, Ballyhaskin	16						13																				
KS113	Carrowdore WwTW	16		31/03/2021	n/a			13												1								1
KS113	Ballywalter WwTW	16		31/03/2021	n/a			13												1								1
KS113	Ballyhaskin WwTW	16		31/03/2021	n/a			13												1								1
KF350	Dungannon WwTW	16		01/01/2021	01/01/2021		31/03/2021	13												1								1
KC463	Ballybogy WwTW	16		31/01/2021	31/01/2021			13												1								1
KA239	Mullans WwTW (Antrim)	16		31/03/2021	n/a	30/09/2017	29/03/2019	13												1						1		
	Greyabbey WwTW	16		31/03/2021	31/03/2021			13												1								1
	Maghaberry WwTW (additional output in 16/17 draft adjusted outputs submission)	16				31/03/2018	02/04/2018	13																		1		
	The Loup	16					15/03/2017	13																1				
	Small Wastewater Treatment Works																											
	Small Wastewater Treatment Works - PC10 Programme >250pe to be detailed																											
KI486	Annahugh WwTW	17			2010/2011			13	nr	1																		
KI486	Galbally WwTW	17			2010/2011			13	nr	1																		
KI486	Maghery WwTW	17			2010/2011			13	nr	1																		
KI486	Montieth WwTW	17			2011/2012			13	nr		1																	
KI486	Orritor WwTW	17			2011/2012			13	nr		1																	
KI486	Garvaghy WwTW	17			2011/2012			13	nr		1																	
KI486	Donagheady WwTW	17			2010/2011			13	nr	1																		
KI486	Attical Tullyframe WwTW	17			2011/2012			13	nr		1																	
KI486	Donagh WwTW	17			2011/2012			13	nr		1												0	0				
KI486	Glack WwTW	17			2012/2013			13	nr			1																
KI486	Teemore WwTW	17			2011/2012			13	nr		1																	
	Small Wastewater Treatment Works - PC10 Programme <250pe to be detailed	17			2010-2013			14	nr	11	23	14																
	Small Wastewater Treatment Works - PC13 Programme <250pe to be detailed	17			2013-2015			14	nr				7	18	7	8	7	8	7	8	7	18						
	Small Wastewater Treatment Works - PC15 Programme <250pe to be detailed	17			2015-2021			14	nr														4	8	7			

BP T4.1	Water Outputs		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
19	Completion of nominated trunk main schemes	6	2	0	2	0	2	1	0	0	1	0	1	0	1	2	1	0	0	1	0
20	Completion of nominated water treatment works schemes	7	2	0	0	0	3	1	0	0	1	0	2	0	3	1	0	0	0	3	0
21	Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks	8	5	3	1	0	1	0	0	1	0	1	1	0	1	0	0	1	1	1	1

BP T4.2	Sewerage Outputs		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
8	Delivery of improvements to nominated UIDs as part of a defined programme of work	12	20	43	38	25	59	27	16	5	8	0	0	28	39	26	11	10	13	18	0
9	Delivery of improvements to nominated WwTWs as part of a defined programme of work	13	29	14	13	17	18	3	4	4	0	1	7	17	18	3	2	3	7	0	7
10	Small wastewater treatment works delivered as part of the rural wastewater investment programme	14	11	23	14	7	18	7	8	7	8	7	8	7	18	4	8	7	0	0	0

Table 40a – Nominated Outputs

The following tables identify those PC15 nominated outputs delivered during the programme. The information aligns with that claimed in the relevant AIR Tables and also endeavours to update the status of the nominated outputs yet to complete.

The information is presented by Sub-Programme and reflects the layout as submitted in Table 40a.

NIW project Code	Project title	Year claimed	Outstanding outputs/ comments
Sub programme 1 – Base Maintenance Water			
N/A	N/A	N/A	
Sub programme 4 – WTW			
JI052	Glenhordial Treatability	2015/16	
JI052	Dorisland Treatability		
JI052	Killyhelvin Treatability		
JL772	Caugh Hill Treatability		
Sub programme 5 – Trunkmains			
JG035	Ballydougan to Newry TM – Phase 2B	2015/16	
JB693	Carland to Cookstown Trunkmain	2016/17	
JL715	Carmoney to Strabane Strategic Link Watermain		See note b
JR342	Castor Bay to Belfast TM	2015/16	See note a
Sub programme 6 – Service Reservoirs and Towers			
JS274	Drumaroad WTW Clear Water Tank		
JP631	Killyhelvin Clear Water Tank		
JB709	Lough Fea CWB		

Note:

a) Castor Bay to Belfast TM – this was a PC13 output. Whilst the trunk main pipeline was complete by the end of March 2015, the new pumps associated with the scheme could not be installed by the PPP contractor without first emptying the Magheraliskmisk service reservoir. This could not be done due to the risk of industrial action. Once the risk of industrial action had ended, the new pumps were installed and the trunk main achieved beneficial use by May 2015. This was included in AIR 16 as a PC15 output.

b) Carmoney to Strabane Strategic Link Watermain – the scope and start date of this scheme will be informed by the conclusions of the Water Resource and Supply Resilience plan.

Summary (Sub programme 12 – UIDs)

UID performance 2016/17

The table below presents UID performance during 2016/17.

UID delivery	2016/17
PC15 FD UIDs delivered in 2016/17	5
PC13 UIDs delivered in 2016/17	4[1]
Non PC15 baseline UIDs delivered in 2016/17	2[2]
Total	**11**

Complete PC15 UID programme

	Category of output	Number of UIDs in category	
		PC15 scope	Outside PC15
	PC15 baseline, delivery in PC15	43	
	PC15 baseline, cannot claim		3
	PC15 baseline, delivery in PC21		8
	PC15 baseline, delivered in PC13	2	
	New, added to PC15	11	
	PC13 carryover, delivery in PC15	24	
	PC13 carryover, cannot claim		1
	Totals	**80**	**12**

[1] This will be added to PC15 outputs through a forthcoming Change Control.
[2] This will be added to PC15 outputs through a forthcoming Change Control.

NIW Project Code	Nominated outputs reference	Title	Delivery year (as stated in PC15 FD)	Current Actual/ Forecast BU	PC15 FD Baseline Nom. Output?	Revised PC15 Nom. Output?	Change description
KA260	UID389	Muckamore WwPS		2017/18	NO	YES	Was part of original DAP - had been land issues when the PC15 baseline was set but these were subsequently resolved.
KA261	UID388	Milltown Road WWPS Upgrade		2016/17	NO	YES	Was part of original DAP - had been land issues when the PC15 baseline was set but these were subsequently resolved.
KA247	UID387	Crumlin Town WWPS Upgrade		2019/20	NO	YES	Will assist with completion of Antrim DAP
KA262	UID391	Islandreagh WWPS Upgrade		2018/19	NO	YES	Was part of original DAP - had been land issues when the PC15 baseline was set.
KA263	UID390	Dunadry WWPS Upgrade		2018/19	NO	YES	Was part of original DAP - had been land issues when the PC15 baseline was set.
KB486	UID399	Galgorm Raphael WWPS	2016/17	2017/18	YES	YES	
KC415	UID040	Ballysally CSO	2015/16	2017/18	YES	YES	
KC415	UID043	Screen Road CSO	2015/16	2014/15	YES	YES	Delivered during PC13
KF330	UID001	Scotch Street CSO 2	2015/16	2015/16	YES	YES	
KF330	UID002	Scotch Street. CSO 1	2015/16	2015/16	YES	YES	
KF330	UID003	Courthouse 1 CSO	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KF330	UID005	The Mall East CSO	2015/16	2016/17	YES	YES	
KF330	UID006	English St CSO. Scheme 2	2014/15	2016/17	NO	YES	Originally PC13, delivery in PC15
KF330	UID010	Newry Road SPS	2015/16	2017/18	YES	YES	
KF330	UID173	Mall West CSO	2015/16	2015/16	YES	YES	
KF330	UID175	Alexander Road CSO	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KF396	UID008	Milford SPS	2014/15	2019/20	NO	YES	Originally PC13, delivery in PC15

NIW Project Code	Nominated outputs reference	Title	Delivery year (as stated in PC15 FD)	Current Actual/ Forecast BU	PC15 FD Baseline Nom. Output?	Revised PC15 Nom. Output?	Change description
KF397	UID009	Killylea SPS	2014/15	2019/20	NO	YES	Originally PC13, delivery in PC15
KG177	UID090	Annagh Catchment CSO 20	2018/19	PC21	YES	NO	Modelling has highlighted issues - constraints regarding flows. This scheme has an interdependence with Meadow Lane that must be addressed first.
KG177	UID091	Annagh SPS CSO 20	2018/19	PC21	YES	NO	Modelling has highlighted issues - constraints regarding flows. This scheme has an interdependence with Meadow Lane that must be addressed first.
KG177	UID092	Chambers Park CSO 01	2018/19	N/A	YES	NO	The area of Chambers Park WwPS and CSO manhole was acquired by ASDA to erect their new store. ASDA designed their site drainage to cater for all flows previously running toward Chambers Park WwPS. The new sewers carry these flows to the new (as yet unadopted) pumping station to the rear of the ASDA site. The pipework was sized to accommodate all flows without the need to retain the existing CSO. On 22/09/2016, NIEA stated that NI Water could not claim this UID.
KG177	UID093	Ballynacor CSO21	2018/19	PC21	YES	NO	Modelling has highlighted issues - constraints regarding flows. This scheme has an interdependence with Meadow Lane that must be addressed first.
KG183	UID081	Meadow Lane CSO 06	2017/18	2018/19	YES	YES	
KG183	UID082	Meadow Lane CSO 07	2016/17	2018/19	YES	YES	
KG183	UID083	Portmore Street CSO 08	2017/18	2018/19	YES	YES	
KG183	UID085	Clonavon Avenue CSO 11	2017/18	2018/19	YES	YES	
KG183	UID086	Meadow Lane CSO 12	2017/18	2018/19	YES	YES	

NIW Project Code	Nominated outputs reference	Title	Delivery year (as stated in PC15 FD)	Current Actual/ Forecast BU	PC15 FD Baseline Nom. Output?	Revised PC15 Nom. Output?	Change description
KG183	UID233	Meadow Lane WWPS CSO 32	2016/17	2018/19	YES	YES	
KL468	UID114	Caw Park CSO 023	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KL468	UID380	Gransha Park WwPS No. 2	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KL504	UID273	Knockalla New WWPS	2014/15	2016/17	NO	YES	Originally PC13, delivery in PC15
KL504	UID274	Upper Galliagh Road WWPS	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KL504	UID275	Glen Road CSO	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KL504	UID433	Fairview Knockalla CSO		2015/16	NO	YES	Was discovered during delivery of related UID273 – was spilling and was endorsed by NIEA. A pumping station was originally in place but was one pump - pump was removed, benched and manhole constructed. It was only during upgrade of new pumping station that overflow was located. Costs associated with this UID were incurred through the delivery UID273.
KL524	UID420	Bleachgreen WWPS		2018/19	NO	YES	Was not identified in DAP but a large number of NIEA pollution incidents were recorded against this site discharging to the River Faughan. Driven and requested by NIEA: pressure also raised by Loughs Agency due to heavy pollution incidents. Had been raised to highest priority by NIEA.
KL527	UID432	Manorwood WWPS		2016/17	NO	YES	NIEA recognised that this WwPS was problematic and approved that this was a legitimate and UID and that it should be addressed during PC15. NIEA had identified spillage from overflow of WwPS to the Ardnabrocky Burn.
KR417	UID191	Cromac Street CSO 95	2016/17	2018/19	YES	YES	

NIW Project Code	Nominated outputs reference	Title	Delivery year (as stated in PC15 FD)	Current Actual/ Forecast BU	PC15 FD Baseline Nom. Output?	Revised PC15 Nom. Output?	Change description
KR417	UID192	Outside Holiday Inn CSO97	2016/17	2018/19	YES	YES	
KR417	UID193	Dublin Road Cinema CSO 96	2016/17	2018/19	YES	YES	
KR417	UID194	Bankmore Street / Dublin Road CSO 81	2016/17	2018/19	YES	YES	
KR417	UID265	Sandy Row CSO 94	2016/17	2018/19	YES	YES	
KR480	UID218	Palace Barracks CSO 110	2015/16	2016/17	YES	YES	
KR489	UID411	Balmoral Avenue CSO63	2015/16	PC21	YES	NO	Changes to the design of scheme KR489 (Sicily Park) mean that this UID will not be addressed through that particular project. This UID may be included within the scope of a different project at a later date.
KR489	UID412	Balmoral Court CSO54	2015/16	PC21	YES	NO	Changes to the design of scheme KR489 (Sicily Park) mean that this UID will not be addressed through that particular project. This UID may be included within the scope of a different project at a later date.
KR489	UID413	Lisburn Road Golf Club CSO58	2016/17	PC21	YES	NO	Changes to the design of scheme KR489 (Sicily Park) mean that this UID will not be addressed through that particular project. This UID may be included within the scope of a different project at a later date.
KR489	UID414	Park Royal CSO57	2016/17	PC21	YES	NO	Changes to the design of scheme KR489 (Sicily Park) mean that this UID will not be addressed through that particular project. This UID may be included within the scope of a different project at a later date.

NIW Project Code	Nominated outputs reference	Title	Delivery year (as stated in PC15 FD)	Current Actual/ Forecast BU	PC15 FD Baseline Nom. Output?	Revised PC15 Nom. Output?	Change description
KR489	UID415	Priory Park CSO55	2017/18	PC21	YES	NO	This UID may be included within the redefined scope of scheme KR489 (Sicily Park) but will not achieve Beneficial Use during PC15. Project KR489 is primarily a DG5 project with only a small fraction of the budget used to address UIDs. The project was 100% Enhanced Service Levels in the PC15 baseline.
KR504	UID351	Portaferry Road WWPS	2018/19	2018/19	YES	YES	
KR640	UID220	Strathearn Court CSO 53	2015/16	2016/17	YES	YES	
KS372	UID044	Market Street SPS Upgrade, Downpatrick - UID's	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KS872	UID011	Carnalea Golf Club CSO 1	2018/19	2018/19	YES	YES	
KS872	UID012	Killaney WWPS 3	2018/19	2018/19	YES	YES	
KS872	UID177	Killaire WWPS 1	2018/19	2015/16	YES	YES	
KS873	UID013	Westburn Cresc. CSO 3A	2014/15	2018/19	NO	YES	Originally PC13, delivery in PC15
KS873	UID014	Crawfordsburn Rd CSO 03B	2014/15	2018/19	NO	YES	Originally PC13, delivery in PC15
KS873	UID015	Crawfordsburn Rd CSO 03C	2014/15	2018/19	NO	YES	Originally PC13, delivery in PC15
KS874	UID016	Maxwell CSO 4	2016/17	2018/19	YES	YES	
KS874	UID017	Stricklands Glen WWPS	2016/17	2018/19	YES	YES	
KS874	UID178	Brompton Road SPS (PS06)	2016/17	2018/19	YES	YES	

NIW Project Code	Nominated outputs reference	Title	Delivery year (as stated in PC15 FD)	Current Actual/ Forecast BU	PC15 FD Baseline Nom. Output?	Revised PC15 Nom. Output?	Change description
KS877	UID023	Castle Park CSO 07	2015/16	2017/18	YES	YES	
KS877	UID179	13 Rugby Avenue CS0 8A	2014/15	2017/18	NO	YES	Originally PC13, delivery in PC15
KS877	UID180	11 Brunswick Road CSO 8B	2015/16	2017/18	YES	YES	
KS877	UID181	104 Abbey Street CSO 8F	2015/16	2017/18	YES	YES	
KS877	UID182	114 Abbey Street CSO 8E	2015/16	2017/18	YES	YES	
KS877	UID183	Railway View Street CSO 8G (not required)	2014/15	N/A	NO	NO	Although initially identified as a UID, subsequent modelling indicated that it did not spill with sufficient frequency to be categorised in this manner. There is no financial impact due to the removal of this UID from scope.
KS877	UID184	Abbey Park CSO 9	2015/16	2017/18	YES	YES	
KS877	UID263	57 Belfast Road CSO 8C	2014/15	2016/17	NO	YES	Originally PC13, delivery in PC15
KS877	UID264	17 Belfast CSO 8D	2014/15	2016/17	NO	YES	Originally PC13, delivery in PC15
KS902	UID237	Parochial House CSO 02	2016/17	2018/19	YES	YES	
KS902	UID238	Main Street CSO 04	2016/17	2018/19	YES	YES	
KS902	UID239	Flynn's WWPS CSO 05	2016/17	2019/20	YES	YES	
KS903	UID266	Halfway House CSO		2015/16	NO	YES	Had potential to pollute Annalong Harbour – delivery endorsed by NIEA. UID advanced following Cross party Councillor complaints regarding discharges.

NIW Project Code	Nominated outputs reference	Title	Delivery year (as stated in PC15 FD)	Current Actual/ Forecast BU	PC15 FD Baseline Nom. Output?	Revised PC15 Nom. Output?	Change description
KS903	UID267	Marine Park CSO		2015/16	NO	YES	Had potential to pollute Annalong Harbour – delivery endorsed by NIEA. UID advanced following Cross party Councillor complaints regarding discharges.
KS930	UID076	Millisle SPS CSO 02	2015/16	2018/19	YES	YES	
KS937	UID032	Annesborough Park WwPS	2015/16	2016/17	YES	YES	
KS939	UID259	Pattons Bridge (Blackrock WwPS	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KS958	UID185	Avonlea Park CSO 6	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KS958	UID186	Rosemary Crescent / Inglewood Pk CSO 5	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KS958	UID187	Clandeboye Road CSO 5B	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KT391	UID068	Hilden PS CSO 13A	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KT391	UID069	Antrim St CSO 25	2015/16	2016/17	YES	YES	
KT391	UID072	New Holland WWT	2015/16	N/A	YES	NO	Investigations established that this was not a network UID – it is located within the boundary of the site: this was not a KT391 UID. This was incorrectly carried through into the PC15 outputs.
KT391	UID073	Duncans Rd CSO 15	2015/16	N/A	YES	NO	Investigation during DAS discovered that no CSO exists at this location: it was established that this was not a UID - was a bifurcation. This was incorrectly carried through into the PC15 outputs.
KT391	UID074	Laws Yard CSO 14	2015/16	2015/16	YES	YES	
KT391	UID222	Linenhall Street CSO 03	2015/16	2014/15	YES	YES	Delivered during PC13

NIW Project Code	Nominated outputs reference	Title	Delivery year (as stated in PC15 FD)	Current Actual/ Forecast BU	PC15 FD Baseline Nom. Output?	Revised PC15 Nom. Output?	Change description
KT391	UID223	Antrim Street CSO 05	2015/16	2019/20	YES	YES	
KT391	UID224	Clonevin Park CSO 10	2015/16	2015/16	YES	YES	
KT391	UID226	Antrim Road CSO 24 + flooding	2015/16	2015/16	YES	YES	
KT391	UID227	Bow Street CSO 26	2015/16	2015/16	YES	YES	
KT391	UID229	Grand Street Screen CSO 28	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KT391	UID421	Edgewater WWPS	2014/15	2015/16	NO	YES	Originally PC13, delivery in PC15
KT391	UID422	Hoggs Weir CSO 04		2015/16	NO	YES	Was identified in DAP but was not included in baseline list of PC15 UIDs

Sub-programme 15 and 16 WwTW			
NI Water project Code	**Project title**	**Year claimed**	**Outstanding outputs/ comments**
KP586	Clabby WwTW		
KS389	Blackrock WwTW	2016/17	
KS907	Annacloy WwTW	2014/15	See note a
KF346	Robinsonstown WwTW		
KL493	Artigarvin WwTW	2015/16	See note b
KI508	UWWTR MCERT compliance	2015/16	
KC296	Ballycastle WwTW		
KN656	Castle Archdale WwTW	2015/16	See note c
KC302	Ballintoy WwTW		
KS235	Ballygowan WwTW		
KS235	Moneyreagh WwTW		
KS111	Ards South - Cloughey		
KL489	Ballykelly WwTW		
KS962	Dundrum WwTW		
KS113	Carrowdore WwTW		
KS113	Ballywalter WwTW		
KS113	Ballyhaskin WwTW		
KF350	Dungannon WwTW		
KC463	Ballybogy WwTW		
KA239	Mullans WwTW (Antrim)		
	Greyabbey WwTW		
	The Loup	2016/17	See note d

Notes

a) Land issues necessitated combined Kilmore/ Annacloy solution. It is significant to note that Annacloy WwTW was originally scheduled to deliver during PC15 but was successfully delivered during PC13.
b) Artigarvin was originally a PC13 output but a review of the delivery approach delayed completion until 2015/16.
c) Castlearchdale WwTW was added to PC13 scope through change control but carried through into PC15: re-profiling into PC15 was due to the requirement for a wildlife survey.
d) The Loup was initially included in the scope of the Rural Wastewater Treatment Works programme. The actual PE of the site has exceeded the 250 PE threshold and a Change Control has re-designated it as a Sub Programme 16 output.

Sub programme 17 – Small Wastewater Treatment Works			
CAR Site Reference	Project title	Year claimed	Outstanding outputs
S00320	Drumlough	2016/17	
S01462	Glenoe WwTW	2016/17	
S04118	Trench Road	2016/17	
S02111	Acton	2016/17	
S02276	McKinley Park	2016/17	
S01160	Longs Glebe	2016/17	
S01622	Kilross	2016/17	
S02593	Milltown (Aghory)	2016/17	

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN- TABLE 41 KEY OUTPUTS
HEALTH & SAFETY INFORMATION (NIW only)

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	**OCCUPATIONAL ILL HEALTH**																				
1	Employee total	nr	0	1,304	A2	1,250	A2	1,240	A2	1,230	A2	1,246	A2								
2	Total days lost due to sickness, accident and occupational ill health	nr	0	9,081	A2	9,962	A2	9,767	A2	10,395	A2	10,188	A2								
3	Total days lost - rate per 1000 employees	nr	2	6,963.96	A2	7,969 60	A2	7,876 61	A2	8,451.22	A2	8,176.57	A2								
4	Number of incidents of occupational ill health	nr	0	137	A2	142	A2	131	A2	134	A2	135	A2								
5	Incidents of occupational ill health - rate per 1000 employees	nr	2	105.06	A2	113 60	A2	105 65	A2	108.94	A2	108.35	A2								
B	**RIDDOR REPORTS**																				
6	Total R DDOR incidents	nr	0	10	A1	6	25	5	A1	7	A1	4	A1								
7	RIDDOR - rate per 1000 employees	nr	2	7.67	A1	4.80	A1	4 03	A1	5.69	A1	3.21	A1								
8	3-day accident rate per 1000 employees	nr	2	7.67	A1	4.80	A1	5	A1	5.68	A1	3.21	A1								
9	Major/fatal accident rate per 1000 employees	nr	2	0.00	A1	0.00	A1	0 00	A1	0.00	A1	0.00	A1								
C	**INCIDENCE OF OCCUPATIONAL ILL HEALTH**																				
10	Contractors' employees total	nr	0	No data		No data		NA		NA		NA									
11	Total days lost due to sickness, accident and occupational ill health	nr	0	No data		No data		NA		NA		NA									
12	Total days lost - rate per 1000 employees	nr	2	No data		No data		No data		No data											
13	Number of incidents of occupational ill health	nr	0	No data		No data		NA		NA		NA									
14	Incidents of occupational ill health - rate per 1000 employees	nr	2	No data		No data		No data		No data											
D	**CONTRACTORS' RIDDOR REPORTS**																				
15	Total R DDOR incidents	nr	0	6	B2	6	B2	5	BX	7	BX	9	BX								
16	RIDDOR - rate per 1000 contractors' employees	nr	2	No data		No data		No data		No data											
17	3-day accident rate per 1000 contractors' employees	nr	0	No data		No data		NA		NA		NA									
18	Major/fatal accident rate per 1000 contractors' employees	nr	2	0.00	B2	0 00	B2	0 00	A2	0.00	A2	0.00	A2								

Table 41 – Health and Safety Information (NI Water only)

Lines 1 - 5 - Lost time

In 2016/17 financial year, NI Water lost a total of 10,188 working days due to sickness, which was equivalent to 8.2 working days lost per employee. The KPI attendance in 16/17 was 96.5% and NI Water delivered an actual rate of 96.3%, 0.2% below the target.

HR Advisors in conjunction with Line Managers continued to meet with staff that breached sick absence trigger points to highlight the importance of good attendance and corrective action was taken where appropriate.

Human Resources also continue to work in partnership with Line Managers, the NI Water Employee Support Officer, Independent Occupational Health, Inspire (our counselling provider) and employees to assist those on long term sick to return to work and to facilitate reasonable adjustments where required.

Further reporting is being undertaken by the Human Resources Department on a weekly basis to update Senior Management on current Absence levels. (This information is also reported in more detail on a monthly basis). This ensure that senior management can see where the actual absence rate is sitting against NI Water's KPI for Attendance and advise on remedial action as needed.

Our attendance rate has increased marginally from 96.2% in 15/16 to 96.3% in 16/17. There was an improvement in staff absence numbers with Cold/Flu/Respiratory illnesses. 724 working days were lost to these illnesses during 2016/17). (Compared to 991working days during 2015/16). The drop this year in Cold/Flu/Respiratory absences may be attributed to the introduction of the flu vaccine, which was offered to all employees for the first time in October 2016. 189 appointments were made by staff to take up the offer, approximately 15% of the workforce.

[redacted]

Frontline Operators have been attending yearly medical assessments where they are assessed for Hand Arm Vibration, Audio and working in confined spaces. NI Water also provides medical assessment for driving and HGV which is currently carried out by Independent Occupational Health.

Psychiatric/psychological remains the highest reason for days lost due to sickness in 2016/17 at 25.1%. This is an increase from 2015/16 when the percentage of total working days lost due to Psychiatric/psychological illness was 20.9%.
There are a number of Health and Wellbeing initiatives that have been developed during 2016/2017, which are as follows:

- Introduction of the flu vaccine in October 2016.
- Stress" workshops by "Carecall" (now called "Inspire"). Sessions commenced on 18 January 2017 and ran during Q4, feedback was very positive.
- Line manager training intervention on attendance management has been developed and will be rolled out in 2017/18.

In dedicating time and resources to these activities, it is anticipated that NI Water will help improve the health and wellbeing offering for staff to enhance their physical and mental capacity.
NI Water's reason for absence reporting differs to the occupational reasons as listed by the Utility Regulator. Our current reporting systems do not specifically record Hand Arm Vibration or work related reasons for absence. In addition to this, work related stress is recorded under the general heading of anxiety/stress/depression.

Due to our failure to meet our KPI, there is a renewed emphasis at both EC and Board to improve our attendance figure but also further develop and implement a number of initiatives to improve the health and well-being for all our staff.

Line 6 – Total RIDDOR (and >3 Lost Day) Incidents

The NI Water procedure for reporting of all incidents is set out in H&S Procedure PRO 008 within the NI Water Health & Safety Manual, (rev. October 2014). All incidents and near misses must be reported to line management as soon as practical, and at least within 24 hours of any incident. An electronic Risk Management and Reporting System (DATIX) is utilised for recording and tracking of all incidents and has been in place since April 2009.

It is the relevant Line Manager's responsibility to ensure all incident details are recorded and managed within the DATIX system.

DATIX entries are monitored by NI Water's Safety, Health and Environment (SHE) Team with statistical safety performance and trends presented monthly by the Head of Safety, at H&S Focus Group, Executive Committee and Board for consideration and discussion.

There were 4 RIDDOR (greater than) >3 Lost Day reportable incidents within NI Water during 2016/17, all of which resulted in more than 3-day work activity-related absences.

Datix Ref	Functional Area	Outline Description	RIDDOR Classification	Lost Days
NIW2139	CSD (Networks Water)	IP stepped into un-covered storm gully on overgrown grass verge injuring his leg.	Slip/Trip/Fall	201
NIW2177	Transport Management Group (TMG)	Whilst using a hydraulic puller to pull a drop arm of a steering box a leg of the pulley broke causing the puller to slip and injure palm of left hand.	Struck by moving object	13
NIW2179	CSD (Networks Water)	Operator was lifting 25Kg bag of Bit-Patch from rear of NIW vehicle and reported back injury.	Handling, lifting or carrying	7
NIW2182	CSD (Networks Water)	Operator went over on his ankle on rough ground while carrying out a site inspection.	Slip/Trip/ Fall	6

NB: NI Water reports all over 3 day incidents under the RIDDOR (Northern Ireland) Regulations, whilst mainland GB reports on over 7 day absences, in line with recent legislative changes affecting only GB.

Line 7 – RIDDOR Rate per 1000 employees

The DATIX process, as described for Line 6 above, provides the total number of RIDDOR (>3 day) incidents, whilst the denominator, the total number of employees, has been calculated by the Human Resources (HR) Directorate as 1246. This gives the RIDDOR Rate per 1000 employees as 3.21 for 2016/17.

Line 8 – Greater than (>) 3 day Incident Rate per 1000 employees

As all RIDDOR incidents refer to incident-related absence (ref. line 6 commentary), the information in Line 8 mirrors that of Line 7.

Line 9 – Major Fatal Incident Rate per 1000 employees

The information gathering process is again as described for Line 6 above. No fatal injuries occurred during2016/17.

Lines 10 – 14 - Contractor Lost Time Incidents

Contractors continue to be managed and directly engaged on a wide range of work activities, projects and contracts on behalf of NI Water. However, core activity, from a Health and Safety perspective relates only to the assistance given by contractors in relation to the provision of water and sewerage services and includes contractors engaged in the construction of new works (ref. line 15 commentary). NI Water has, throughout 2016/17 been engaged in a continuing process of change, regarding the numbers of contractors assisting in asset delivery and improvement of this core activity, as efficiency measures continue to be put in place,

Given the changing nature of contract provision as outlined above and the variety of work undertaken, NI Water has no available methodology for calculating and determining accurately the number of contractors' staff engaged in all core related activities and this is unlikely to change in the short term.

Line 15 – Contractors' RIDDOR Reports

The Northern Ireland public regards all work related with water and sewerage services, including design and build work, to be closely associated with NI Water. NI Water, in turn, recognises its own duty of care to all of its contractors as a Client organisation when they are carrying out work and therefore sees its duty as one of leadership. NI Water therefore maintains a record of monitoring on all contractor and subcontractor reported incidents, which includes all incidents relating to transient workers. NI Water encourages and requires the reporting of all near-miss incidents involving contractors to facilitate a shared learning experience, in line with NI Water's 'Zero Harm' ambition.

All Contractor and subcontractor incidents are recorded on DATIX and for 2016/17 the total number of RIDDOR related incidents reported to NI Water by all contractors was 9, with a further three reported incidents being regarded as Dangerous Occurrences but where no harm or injury resulted, (see table). This was an increase in reports on last year when 7 incidents were recorded. Contractor performance continues to be monitored by NI Water's H&S Focus Group, by Executive Committee and by Board at their monthly meetings. On a quarterly basis, Risk Committee also consider and review safety performance, recent incidents and trend analysis of both NI Water staff and contractor performance.

Datix Ref	Contractor Incident Description	RIDDOR Classification	Lost Days
NIW2030	Operative fractured a finger during loading of a cable drum.	Handling, Lifting or Carrying	18
NIW2059	Operative carrying out 'Cured In Placed Pipeline' (CIPP) repair had resin splashed under their eye protection.	Contact with, a harmful substance	4
NIW2133 **(Dangerous Occurrence)**	HSENI Inspector served on-site Prohibition Notice following observation of unsafe practice within an open excavation. No harm or injury resulted.	Unsafe Work Practice	None
NIW2133 **(Dangerous Occurrence)**	Sub-contractor delivery vehicle made contact with HV overhead line apparatus on exiting WwPS site. No harm or injury resulted.	Contact with OH cables / apparatus	None
ID2240	During lifting operations, Operative caught and fractured a finger in the lifting chains.	Handling, Lifting or Carrying	14

Datix Ref	Contractor Incident Description	RIDDOR Classification	Lost Days
NIW2169 **(Dangerous Occurrence)**	Gas & Electrical services damaged during excavation work. Volume of gas release required notification under RIDDOR. No injury or harm resulted.	Uncontrolled release gas	None
NIW2174	Operative went over on his ankle.	Slip/Trip/Fall	>3 days
NIW2180	Operative suffered eye injury when the handle of a folding door came off striking him.	Struck by	>3 days
NIW2312	Operative fractured his elbow when he fell over from a 47cm high platform but returned to work. No lost days resulted.	Slip/Trip/Fall	None
NIW2376	Operative injured knee whilst dismounting from 9T dumper.	Slip/Trip/Fall	17
NIW2391	Consultant carrying out surveying work stepped off a raised concrete plinth onto the adjacent grass, lost his footing and twisted his ankle.	Slip/Trip/Fall	>3 days
NIW2400	While tightening a bolt on a flanged pipe, Operative seriously injured finger due to the spanner slipping.	Handling, Lifting or Carrying	>3 days

Lines 16 - 17 – Contractor RIDDOR and >3 Day Incident Rates

Information is not collected for this line, as NI Water has no available methodology for calculating and determining accurately the numbers of direct contractor employees working on all NI Water contracts. Incident Rates therefore become difficult to calculate.

Line 18 – Contractor Major Fatal Incident Rate per 1000 employees

There were no major or fatal incidents connected with NI Water contractors or sub-contractors, including transient workers, during 2016/17. This allows this rate to be calculated as zero.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN- TABLE 42 PPP REPORTING
PPP REPORTING

	DESCRIPTION	UNITS	DP	CG	Corresponding Report	Calculation	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
A	PROJECT DESCRIPTION																											
1	PPP Concession	text	na		na		Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Kinnegar	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Alpha	Kinnegar	Omega	Water Service	Sewerage Sevice
2	Service Area	text	na		na		WT	WT	WT	WT	WD/WT	WD	WD	WWT	WWT	WWT	WWT	WWT	WWT	WWS	WWS	WWS	WWS	All	All	All		
3	Name of works	text	na		na		Balinrees	Castor Bay	Dunore Point	Moyola	DBFO LM & FKd BDG Cont TK	Ballymoney LM	Limavady LM	Kinnegar	Richhill	Armagh	Ballynacor	North Down	Ballyrickard	Ballynacor Lagoons	Ballynacor	Duncrue	Sludge Service	Total	Total	Total	Total	Total
4	Commencement date	date	na		na		10/10/2008	09/12/2008	11/12/2008	16/09/2008	16/12/2008	15/10/2008	15/10/2008	24/05/2001	08/04/2009	27/08/2009	14/11/2009	05/05/2008	20/04/2009	N/A	31/03/2010	31/03/2010	31/03/2010					
5	Service duration	yrs	0		na		23	23	23	23	23	N/A	N/A	23	23	23	22	24	23	N/A	22	22	22					
6	Service completion date	date	na		na		30/05/2031	30/05/2031	30/05/2031	30/05/2031	30/05/2031	N/A	N/A	23/04/2024	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032					
B	PAYMENT TO PPP CONCESSIONAIRE																											
7	Unitary Charge Capacity	£m	3		na																			3				
8	Unitary Charge Variable	£m	3		na																							
9	Unitary Charge Deductions	£m	3		na																							
10	Atypical expenditure	£m	3		na																							
11	Efficiency Gains, included in 7 & 8	£m	3		na																							
12	Total PPP Payments (7to 10)	£m	3		na	Sum 7 to 10																						
13	Capital repayment	£m	3		na																							
14	Maintenance	£m	3		na																							
15	Residual interest	£m	3		na																							
16	Atypical payments capitalised	£m	3		na																							
17	Total capitalised (13 to 16)	£m	3		na	Sum 13 to 16																						
18	Total PPP Expensed (12-17)	£m	3		na	Lines 12-17																						
19	Interest	£m	3		na																							
20	Total PPP Opex (18-19)	£m	3		na	Line 18-19																						
C	WATER DISTRIBUTION DATA																											
21	Distribution input	Mld	2	B2	Table 10 Line 26		29.43	122.00	93.25	14.98														259.66			259.66	
21a	Water Treatment Works Capacity	Mld	0	A1			50	147	180	19														396.00			396.00	
22	Length of mains	km	2	A2	Table 11 Line 12						16.42	0.00	0.00											16.42			16.42	
D	WATER RESOURCE AND TREATMENT DATA																											
23	Turbidity 95%ile greater or equal to 0.5NTU	1/0	0	A2			0	0	0	0	0													0			0	
24	Turbidity 95%ile less than 0.5NTU	1/0	0	A2			1	1	1	1	1													5			5	
25	Source Type	text		A1	Table 12 Block A		R x 2 + River	River	River	River	N/A													2 x I.R. 4 x River			2 x I.R. 4 x River	
26	Treatment type	text		A1	Table 12 Block B		W4	W4	W4	W4	N/A													4 x W4			4 x W4	
27	Average pumping head	m.hd	1	B3	Table 12 Block A		147.2	149.3	173.0	146.5	N/A													157.4			157.4	
E	SEWERAGE DATA																											
28	Total length of sewer	km	2	B2										0.00	0.00	0.00	10.50	10.63	0.00						0.00	21.13		21.13
29	Total length of critical sewer	km	2	B2										0.00	0.00	0.00	10.50	10.63	0.00						0.00	21.13		21.13
F	SEWAGE TREATMENT AND DISPOSAL DATA																											
30	Population equivalent of total load received	000	0	B3	Table 17b line 2									80	2	18	118	69	39						80	246		326
31	Load received by STW's	kg BOD/day	0	B3	Table 17d									4774	117	845	7168	4647	2615						4774	15392		20166
32	Suspended solids consent	mg/l	0	A1	Table 17b line 3									45/150	20/50	20/50	35/-	35/90	10/30									
33	BOD5 consent	mg/l	0	A1	Table 17b line 4									25/80	07/30	08/30	25/50	25/50	10/35									
34	COD consent	mg/l	0	A1	Table 17b line 5									125.00	125.00	125.00	125.00	125.00	125.00									
35	Ammonia consent	mg/l	0	A1	Table 17b line 6									N/A	02/10	02/10	7.5/32	N/A	N/A									
36	Phosphates consent	mg/l	0	A1	Table 17b line 7									N/A	N/A	<1 Ann Avg	<1 Ann Avg	N/A	N/A									
37	Classification of Treatment Works	text		A1	Table 17b line 8									SAS	TA1	TA2	TA2	TA2	TA2									
38	Size band of sewage treatment works	nr	0	B3	Table 17c									6	4	5	6	6	6									
G	SLUDGE TREATMENT AND DISPOSAL DATA																											
39	Total sludge imported from NI Water	ttds	3	B2										N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.370	30.987	36.357		N/A	36.357		36.357
40	Sludge produced by the PPP facility	ttds	3	B2										0.302	0.071	0.605	1.739	1.656	1.293	0.000	N/A	N/A	0.000		0.302	5.364		5.666
41	Sludge exported to Duncrue Incinerator	ttds	3	B2										0.302	0.071	0.605	1.739	1.656	1.293	0.000	N/A	N/A	0.000		0.302	5.364		5.666
42	Sludge exported to other PPP facilities	ttds	3	A1										N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000		N/A	0.000		0.000
43	Sludge exported to NI Water	ttds	3	A1										N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000		N/A	0.000		0.000
44	Sludge disposed of from site to - Farmland Untreated	ttds	3	A1	Table 17G Col 1									N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000		N/A	0.000		0.000
45	Sludge disposed of from site to - Farmland Convestiona	ttds	3	A1	Table 17G Col 2									N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000		N/A	0.000		0.000
46	Sludge disposed of from site to - Farmland Advanced	ttds	3	B3	Table 17G Col 3									N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.714		N/A	2.714		2.714
47	Sludge disposed of from site to - Incineration	ttds	3	B2	Table 17G Col 4									N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000		N/A	39.085		39.085
48	Sludge disposed of from site to - Landfill	ttds	3	B3	Table 17G Col 6									0.058	0.004	0.021	0.049	0.056	0.052	0.000	0.007	0.017	0.000		0.058	0.206		0.264
49	Sludge disposed of from site to - Composted	ttds	3	A1	Table 17G Col 7									N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000		N/A	0.000		0.000
50	Sludge disposed of from site to - Land Reclamation	ttds	3	B3	Table 17G Col 8									N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.225		N/A	0.225		0.225
51	Sludge disposed of from site to - Other (Willow Coppice	ttds	3	A1	Table 17G Col 9									N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000		N/A	0.000		0.000
52	Sludge disposed of from site - Total	ttds	3	B2										0.360	0.075	0.626	1.788	1.712	1.345	0.000	5.377	31.004	39.296		0.058	42.230		42.288

Table 42 – PPP Reporting

Line 4 & Line 5

No Change from AIR16 data.

Note: As the atypical expenditure, efficiencies, performance deductions (Omega) and residual interest (Omega) were not divisible by site the cross tots on lines 9,10, 11, 12, 15, 17, 18 and 20 will not agree to the figures in the total column – the figures included in the total columns are correct for each concession.

Line 7 - Unitary charge capacity

The Unitary Charge Capacity Charge applies to Alpha only. The data used is derived from the invoices received from the Contractor, which separates the Unitary Charge Capacity Charge from the Unitary Variable Charge and the relevant Unitary Charge Performance Deductions, all in accordance with the Payment Mechanism Schedule of the Contract. Costs on this line have increased by an inflationary amount from 2015/16.

Line 8 - Unitary charge variable

The Unitary Charge Variable Charge applies to all three PPP Contracts. The data used is derived from the invoices received from the Contractor which set out the Unitary Charge Variable Charge claimed. There are no payments in respect of the Ballynacor Sludge Facility and the Duncrue St Sludge Facility, rather a payment in respect of the Sludge Disposal Services. In total, costs on this line have decreased by 0.7% from 2015/16 driven by a combination of inflation and flow variations in the year. In terms of flow variations, the movements are as follows:

Alpha DI – increased by 11.6% (259.9 ML/D vs 232.9ML/D in AIR16)
Omega WwTW – flows reduced by 22% (28.4Mm3 vs 36.4Mm3 in AIR16)
Omega SDS – volume increased by 9% (42.0k TDS vs 38.6k TDS in AIR16)

Line 9 - Unitary charge deductions

By contract definition, where the PPP Contractors invoice to an amount higher than the amount payable in accordance with the relevant Payment Mechanisms, the variance becomes a disputed amount. The Company recognises the disputed amount as an outstanding liability until such time as the Parties choose to have the dispute determined, or agree an amount for payment with credit note issued for closure as appropriate.

Alpha

The Alpha Contractor, through engagement, invoices to the agreed amount which includes the relevant Performance Deductions. These Deductions are in accordance with the Payment Mechanism for failure events identified and can be separated by Facility (Scheme) as per the Payment Mechanism. Performance deductions in 2016/17 were [redacted], a reduction of [redacted] on the 2015/16 amount of [redacted].

Omega

No credits for performance deductions have been received in the 2016/17 year.

Kinnegar

No credits for performance deductions at Kinnegar have been received in the 2016/17 year.

Line 10 - Atypical expenditure

Alpha [redacted]

	£m
Quality Monitoring Change credit	[redacted]
EIB Step-down	
Refund in respect of reorganisation costs	
Total	

- As a result of the Quality Monitoring Change to the Contract an amount is deducted from the Alpha monthly invoice to reflect the reduced costs from lab services being carried out in house by NIW. The deduction amounted to [redacted] in 2016/17.
- In 2016/17 a reduction of [redacted] was realised in the unitary charge tariffs resulting from the EIB step-down. This was a pre-set change in the 45% finance provided by EIB, conditional upon achieving operational performance and Special Purpose Company (SPC) debt cover ratio targets.
- An agreement is in place to provide for a change in unitary charge arising from the lower number of TUPE transferees than that anticipated at financial close. The parties have agreed to reflect the variance in semi-annual Project Costs as per the Financial Model by making adjustments in the monthly invoice at the end of each Semi Annual Period. To this extent the repayments made in 2016/17 were [redacted].

Kinnegar £nil

- There was no atypical expenditure relating to Kinnegar in 2016/17

Omega [redacted]

	£m
Performance Deductions Re-Accrued	[redacted]
Additional adjudication cost	
North Down & Ards Disinfection Change	
Supplemental 4 agreement	
Change in calibration frequency	
Out of spec sludges (2016/17)	
DWF credit releases	
Ballynacor Wildflower Meadow	
Ballynacor Accrual (503k vs 500k)	
Non Compliant Sludge	
Total	

- [redacted] in relation to re-accrual of performance deductions which were previously accepted and credit notes received. These amounts have been challenged by the contractor with a significant proportion being repaid in the 2016/17 year.
- [redacted] in relation to an Omega adjudication.
- The North Down Disinfection Change implemented in Sept 2011 resulted in a [redacted] efficiency saving in 2016/17. This was a Service Level Adjustment change in treated effluent performance requirements to reflect the lower standards of the Water Order Consent.
- As a result of Omega Supplemental Agreement 4, executed in 2011/12, an amount is deducted from the monthly invoice to reflect the change in wastewater flow

management performance requirements. The deduction amounted to [redacted] in 2016/17.

- During 2013/14 a service level change was implemented relating to the frequency of calibration of the Sludge Cake Weighbridge at Duncrue St. This resulted in a [redacted] saving in 2016/17.
- [redacted] was accrued in relation to the cost of out of specification sludges in the 2016/17year.
- [redacted] release of DWF credits held on the Balance Sheet
- Other comprises of [redacted] spend on Ballynacor Wildflower Meadow, [redacted] spend in relation to Non Compliant Sludge and an over-accrual of [redacted] in relation to Ballynacor Lagoons.

Line 11 - Efficiency Gains

The Company has transferred the cost risk of service provision (other than where relating to a Change in Law) to the Concessionaires, excluding the cost of electricity in Alpha and Omega. In so doing, the Concessionaires carry the downside risk of costs materializing and the benefits where they do not. The Company does not have the right to cost savings for **the same level of service** where the contractor has internally identified means of securing such savings.

Post procurement any reduction in the Company PPP Unitary charge costs (whether identified by the Company or the Concessionaires) emanate only from a Change in the level of service.

The following Changes for cost reduction have resulted in efficiency gains in 2016/17 against the baseline contract at award:

Alpha

The reorganisation costs credit [redacted], quality monitoring change [redacted] all detailed above are efficiency gains arising in the 2016/17 year.

Omega

The North Down Disinfection Change implemented in Sept 2011 resulted in a [redacted] efficiency saving in 2016/17.

Supplemental Agreement 4 executed in 2011/12 reflecting a change in wastewater flow management performance requirements resulted in a [redacted] deduction in 2016/17.

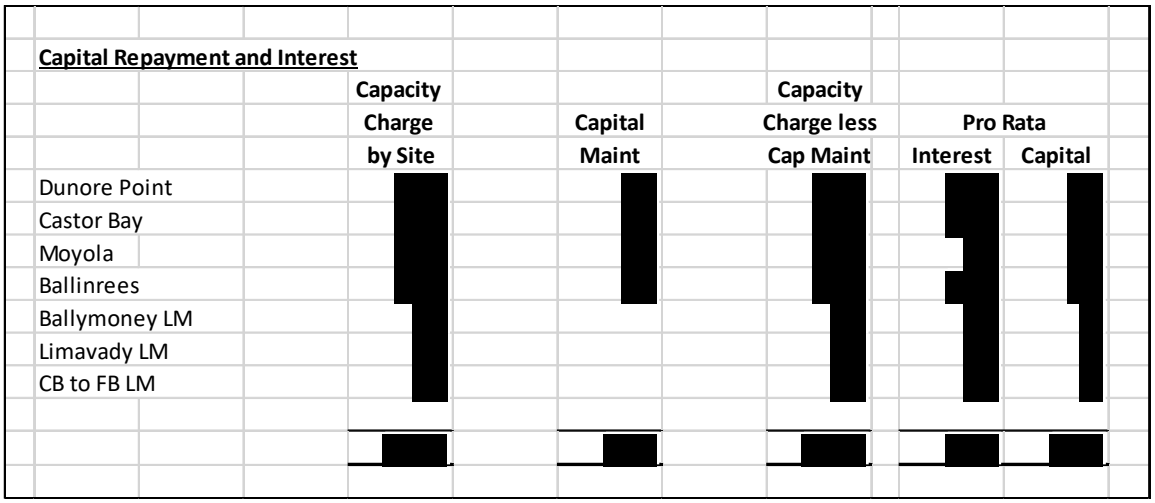
The change in weighbridge calibration frequency implemented in 2013/14 resulted in [redacted] of saving this year.

Kinnegar

No Contract Changes for cost reduction have been implemented during the Reporting Period.

Line 13 - Capital repayments

This line reflects the element of Alpha payments paying off the finance lease creditor. The data is consistent with the Company's financial accounts. The site split of the capital repayment is calculated as follows:



Capital Repayment and Interest	Capacity Charge by Site	Capital Maint	Capacity Charge less Cap Maint	Pro Rata Interest	Pro Rata Capital
Dunore Point					
Castor Bay					
Moyola					
Ballinrees					
Ballymoney LM					
Limavady LM					
CB to FB LM					

(The above table is an extract from an excel spreadsheet with totals based on rounded values)

Line 14 - Capital maintenance

Capital maintenance is allocated straight line across the life of the contract following a change implemented in 2013/14. This correctly reflects that the unitary charge does not fluctuate with changes in the capital maintenance spend in any year. This straight line amount has been allocated to the sites on the basis of the total amounts included in the original Alpha financial model as follows:

Capital Maintenance	To End per Fin Model	After Indexation	2016/17
Dunore Point			
Castor Bay			
Moyola			
Ballinrees			

(The above table is an extract from an excel spreadsheet with totals based on rounded values)

Line 15 - Residual interest

As Kinnegar and Omega are off balance sheet an element of the unitary charge is capitalised to reflect residual value in NIW accounts at the end of the contract – figures taken from Contractors Financial Models. The total for Omega is not divisible by Facility (Scheme).

Line 16 - Atypical payments capitalised

Nil

Line 19 - Interest

As Alpha is an on-balance sheet PFI contract the Company has recognised a finance lease creditor on its balance sheet - this figure represents the notional interest on the finance lease. The data is consistent with the Company's financial accounts. See point 13 above for site allocation workings.

The Company's statutory accounts have been prepared on an IFRS basis in 2016/17. The amounts disclosed in lines 12, 13, 14, 15, 19 and 20 are all consistent with the figures in the Company's financial accounts pre IFRS adjustments.

A breakdown of the accruals included in the year end accounts in relation to each of the PPP contracts is as follows:

	Alpha	Omega	Kinnegar	Total
	£m	£m	£m	£m
Unitary Charge				
Disputed Amts				
Claims				
Other				

An amount of [redacted] included in unitary charge accruals of [redacted] relates to the outstanding monthly invoices for February and March unpaid at 31 March 2017. Also included in this amount is [redacted] of additional unitary charge arising from the Ballynacor TDS mandatory contract change which became effective from 1 April 2010 and was agreed during 2013/14.

The [redacted] of disputed amounts largely arise from 2013/14 - 2016/17 Omega disputes in relation to performance deductions.

The [redacted] has moved from the previous year as follows.

Accrual at 31 March 2016	[redacted]
2016/17 Payment	[redacted]
2016/17 New Accrual	[redacted]
Accrual at 31 March 2017	[redacted]

The other accruals include [redacted] for contractor claims for additional costs associated with the industrial action which has been held to cover the risk that Water Treatment Residuals to sewer was otherwise a breach of contract.

Contracted Adjustments to Payment Mechanisms

Omega: The Company has notified a change in the requirements for Faecal Coliform performance at North Down Ards WWTW in line with its contractual entitlement. This has resulted in the predetermined [redacted] reduction in Unitary Charge on every day outside of the regulatory Bathing Season coming into effect since September 2011.

The Company and the Contractor have agreed the outcome of the mandatory process to correct Ballynacor tariffs and tariff bands in the event that the actual DWF encountered was similar to that determined in the pre contract Flow surveys, and not as low as that upon which the Contractor conditioned his bid tariffs upon. The result of the process is that the tariff for Ballynacor flows is marginally reduced for the remainder of the contract with effect from 1st January 2014.

The Company and the Contractor engaged on the Contract Change [Schedule Defined] to remediate the Sludge Lagoons at Ballynacor WwTW; which had a contracted valued of [redacted] This work was effectively complete in autumn 2015, the remaining [redacted] to finalise [Landscaping] was completed by August 2016.

Alpha: The EIB Step Down clause has become effective in the Alpha contract, with a resultant reduction in European Investment Bank interest charging to Dalriada Water, and the Unitary Charge being reduced by the predetermined contractual amounts for the remainder of the EIB loan period (2027). The amounts are, by agreement, deducted monthly from invoices rather than driving a new Unitary Charge tariff at considerable project expense (and loss of benefit).

Changes to the Contracts

There has been one minor change to the Omega Contract during the AIR17 Period.

- **Omega: Donaghadee Energy Efficiency Gains Project:**
  The Company has invested [redacted] to deliver an improved (lower) target power consumption at Donaghadee PS, with a payback period of less than 3 years. The project arises from an efficiency proposal identified by the Contractor in its annual energy report.

Historical Changes since contract award are as listed below;

- **Omega: Supplemental Agreement 3**

  This was executed on August 2011 to clarify the sludge performance requirements and deal with commercial matters surrounding uncertainty of sludge services performed in AIR11 period.
- **Omega: Supplemental 4**

  This was executed on 6th April 2012. It clarified the wastewater treatment flow management requirements to a measurable output, and in so doing dealt with the commercial issues surrounding disputed underperformance and payment entitlements in this area since May 2008. The Agreement also enabled the Company to reduce its monthly unitary charge liability by [redacted] (indexed) for the remainder of the contract term. A further passing down of rights and obligations in respect of NIE easements was included.
- **Omega: Change in Contractors Proposals – Duncrue St Centrifuge**

  In December 2012 the Company accepted a change in the contractor's asset base at Duncrue St, whereby the Contractor installed a Centrifuge in preference to the four belt presses inherited at Service Commencement. Whilst this improvement was funded by the Contractor and not the Company, the Company established an estimated change in electricity consumption liability and the Contractor agreed to fund the additional consumption at current tariffs (+ indexation), through a new payment Clause in the contract – consistent with the risk allocation at contract award.
- **Omega: Ballynacor Sludge Dewatering Plant Change**

  A pre-determined Change in the sludge disposal tariff arising from the underperformance of the Company's new Ballynacor Sludge Dewatering Facility following its initial commissioning in 2006/ 2007 during contract negotiations.

  The Omega contract was awarded on the understanding the new plant would be capable of producing >22% DS content in the years preceding Service Commencement.

  As was the case, records demonstrated the Company was only capable of achieving 19.6% DS operation during this period.

  The pre-determined (as agreed at Contract Award) cost reimbursement mechanism applies with the result that a schedule of semi-annual additional payments take place, dating back to Service Commencement in March 2010.

Whilst the Contractor initially disputed the sums due, they finally conceded Company's valuation of such historical and future payments in September 2013.

The cost of this mandatory change is approximately [redacted] (indexed) every semi-annual period until contract expiry in 2032.

- **Omega: Duncrue St Weighbridge Calibration Change**

  The weighbridge is integral to the determination of tonnes dry solid sludge for disposal and thus payment. The weighbridge is calibrated weekly and has never been outside calibration since first used in March 2010. The parties have agreed a cost reduction measure reducing the calibration to every 3 months. The cost saving to the Contractor is [redacted] and is shared 50:50 with the Company. The arrangements have been in effect since 3 December 2013.

- **Omega: Duncrue St Condenser Change**

  An Authority Change issued in advance of Service Commencement in 2009 to deal with a defective existing asset. Whilst the work was completed in 2009 the costs were only agreed in late 2013, with payment by the Company in 2014/15.

- **Omega Small Works NDA Access Change**

  A [redacted] Change to pay for securing alternative access road at North Down Ards; a legacy from Water Service Deed of purchase of NDA lands in 2005 where the seller had the right to close up existing NDA access and provide alternative access and a Deed of Easement. Work is complete and payment has been made.

- **Richill DWF Change**

  The DWF into Richill WWTW is lower than anticipated at commercial close, resulting in an unjust negative payment to the contractor at low flows due to a pre-agreed constant value for 0.8DWF. The parties have agreed an alternative value for the constant in the payment mechanism.

- **Kinnegar Supplemental Agreement 2**

  This commercial agreement resolved historical disputed payments, along with affecting a new odour model for the works, and creating new contractor obligations in terms of regulatory reporting and sampling consistent with current Company obligations not envisaged at the time of procurement.

- **Kinnegar Clause 10 Payment**

  A Variation was required in relation to the provision of the Holywood C Pumping Station by NI Water E&P, requiring part of the Leased Premises being returned to Company occupation, and the reimbursement of the Contractors costs with altering the necessary sewerage infrastructure. These costs amounted to [redacted] @ 20% [redacted] This value was paid to the Contractor on 30th January 2015.

- **Alpha Deed of Variation No.3**

  Amended and restated the contract in respect of all previous changes and corrections made to date.

- **Alpha Contractor Notice of Change (June 2012)**

  Reduced the scope of service (i.e. frequency and range of analytical tests) to achieve cost reduction in Unitary charge for the remaining contract period (Deriving [redacted] per year reduction in Company costs).

- **Alpha Contractor Change: Standby Generator Capacity for NI Power Grid**

  A contract change has been put in place to allow the Contractor to make the site generators at two WTW's available to an Aggregated Generation Unit (AGU) company in return for an 'availability charge'. The annual availability charge is

estimated to be worth up to [redacted] with 50% of this revenue being netted off the Unitary Charge payable by NIW for the period of the AGU agreement (currently 5 years).

- **Alpha: Authority Change – Castor Bay to Belfast Pumping Station Upgrade** To support the increased output to Magheraliskmisk arising from the Castor Bay to Belfast Strategic link main project

Contractual Performance Failures during AIR17 Period:

Alpha Performance Deductions: 2016/17

The Company has identified and applied [redacted] of performance deductions over the AIR17 Period

- Water Quantity failures can be referenced (on a monthly basis) in the Payment Calculation Schedule Tab 5 spreadsheet under the column heading 'CRF' for each Facility. (The Company has provided a supporting CD with all 12 monthly Payment Calculation Schedules for the AIR year). Total deductions: [redacted] [AIR16 period total deductions [redacted]].

- Water Quality Failures can be referenced on Payment Calculation Tab 9 under the column headed 'QRF' for each Facility *(The Company has provided a supporting CD with all 12 monthly Payment Calculation Schedules for the AIR year).*Further details of the exact water quality parameter failed result can be referenced on the monthly Exceedance Reports derived from the Company's LIMS system *(The Company has provided a supporting CD will all 12 LIM's Exceedance Reports for the Alpha Facilities. Total deductions: [redacted] [AIR16 period total deductions [redacted]]. A number of the deductions, totalling [redacted] are disputed by the Contractor.*

Kinnegar Performance Deductions 2016/17

The Company had determined no failures in the Reporting Period

Omega Performance Deductions 2016/17

- The Company has determined, but the Contractor has not accepted, the following failures on the Wastewater Services during the period:
  - OR1 Deduction applied at Bullayshill WwTW [March 2017]: [redacted]
- The Company has determined, but the Contractor has not accepted, the following failures on Sludge Services during the period:
  - Odour Failure at Ballynacor WwTW [August 2016]: [redacted]

The Contractor disputes the application of these deductions and the Company has accrued the sums until the disputes are settled.

Contractual Deductions made

- Project Alpha as per Line 9 reporting for each Facility, based on the outputs of the monthly Payment Calculation Schedules.
- Project Omega; The disputed deductions listed above totalling [redacted] have not been included in this line, as a credit notes has not been received and the amounts are in dispute. These disputed sums; and those of previous AIR periods, totalling [redacted] have not been credited and are not therefore reflected in Line 9.
- Project Kinnegar; there are no disputed deductions to require an accrual.

Equipment breakdowns

The Company does not hold this level of operational detail as the risk has been transferred to the Contractors and passed down to the Operating sub-contractor.

Changes to the Descriptive Reports on the PPP Contracts

There have been material changes to the PPP Facilities at Kinnegar WwTW due to the provision of Holywood C Pumping Station which collects the flow from the Huttons Field Inlet and conveys it to the Inlet Channel at Kinnegar WwTW.

An additional amendment to the Alpha Descriptive Report to reflect the alteration of the Delivery Point Capacity at CB1 from 30MLD to 48.5MLD, which required a substantial upgrade of the Castor Bay pumping station.

The Descriptive reports for the Omega Contract remains unchanged.

Lines 23 – 24 - Turbidity

Background – Year on Year

During the period 2005 to date, a number of non-compliant water treatment works (WTWs) and small sources have either been completely replaced with new works, or else taken out of service as and when a replacement supply is available. During 2008, 5 existing major WTWs were replaced/upgraded as part of the Alpha PPP project. This contributed to the closure during 2009 of 6 non-compliant small water treatment works/sources.

During 2010 a further 2 non-compliant small water treatment works/sources were also closed. However, these were temporarily reinstated during the 2010-11 freeze/thaw incident to supplement strained water supplies.

During 2011 a further 3 non-compliant small water treatment works/sources were also closed.

During 2016 one further non-compliant small water treatment works was also closed.

At the end of 2016, the WTWs in service have now stabilised with 19 NIW sites and 5 PPP.

The guidance now requires that the PPP sites are solely assessed in this table.

The calculations were carried using the following data criteria:

- Only scheduled audit final water samples lifted to meet Water Supply regulatory requirements during the calendar year were used, and using accredited laboratory analyses rather than onsite analyses.
- Only those WTWs which had more than 11 months' worth of data or had temporary out of service gaps were included. This led to no PPP sites being excluded.

2016 PPP WTW Included in calculations

WTW Code	WTW Name	Turbidity 95 %ile	>= 0.5 NTU
W1301P	Moyola PPP	0.153	0
W1701P	Ballinrees PPP	0.194	0
W2308P	Castor Bay PPP	0.252	0
W3301P	Dunore Point PPP	0.206	0
W3315P	Forked Bridge PPP	0.234	0

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN- TABLE 43 PPP REPORTING
PPP REPORTING - OPERATIONAL COSTS

	DESCRIPTION	UNITS	DP	Corresponding Report	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
A	PROJECT DESCRIPTION				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	PPP Concession			na	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Kinnegar	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Alpha	Kinnegar	Omega	Water Service	Sewerage Service
2	Service Area			na	WT	WT	WT	WT	WD	WD	WD	WWT	WWT	WWT	WWT	WWT	WWT	WWS	WWS	WWS	All	All	All		
3	Name of works			na	Balinrees	Castor Bay	Dunore Point	Moyola	DBFO LM	Ballymoney LM	Limavady LM	Kinnegar	Richhill	Armagh	Ballynacor Craigavon	North Down	Ballyrickard	Ballinacor Lagoons	Ballynacor	Duncrue	Total	Total	Total	Total	Total
B	PPP INFORMATION																								
4	Payment to Concessionaire	£m	3	Table 42 Line 12	[redacted]																				
5	Payment by Concessionaire to Operating Company	£m	3		[redacted]																				
C	DIRECT COSTS TO NI WATER																								
6	Power	£m	3		0.739	2.120	1.440	0 386	0.000			0.000	0.032	0.110	0.589	0.839	0.225	0.000	0.054	1.161	4.685	0.000	3.010	4.685	3.010
7	Other direct costs	£m	3		0.056	0.009	0.009	0 009													0.083	0.000	0.000	0.083	0.000
8	Total direct costs	£m	3	sum 6 + 7	0.795	2.129	1.449	0 395	0.000	0.000	0.000	0.000	0.032	0.110	0.589	0.839	0.225	0.000	0.054	1.161	4.768	0.000	3.010	4.768	3.010
9	General and support expenditure	£m	3		0.010	0.011	0.011	0 010	0.010	0.010	0.010	0.033	0.034	0.034	0.035	0.035	0.034		0.034	0.035	0.072	0.033	0.241	0.072	0.274
10	Total functional expenditure	£m	3	sum 8 + 9	0.805	2.140	1.460	0.405	0.010	0.010	0.010	0.033	0.066	0.144	0.624	0.874	0.259	0.000	0.088	1.196	4.840	0.033	3.251	4.840	3.284
D	OPERATING EXPENDITURE - NI WATER																								
11	Scientific services	£m	3		0.000	0.000	0.000	0 000	0.000	0.000	0.000	0.022	0.002	0.003	0.006	0.002	0.003	0.000	0.000	0.063	0.000	0.022	0.079	0.000	0.101
12	Rates	£m	3		0.816	3.399	2.591	0.420	0.000	0.000	0.000	0.148	0.022	0.097	0.311	0.158	0.109	0.000	0.087	0.150	7.226	0.148	0.934	7.226	1.082
13	Estimated terminal pumping costs	£m	3									0.000	0.000	0.000	0.127	0.188	0.000	0.000	0.000	0.000		0.000	0.315		0.315
14	Estimated sludge costs	£m	3									0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.175	8.262		0.000	8.437		8.437
E	TOTAL PPP OPERATING EXPENDITURE																								
15	Total PPP operating expenditure	£m	3	Sum 5, 10, 11 and 12	[redacted]																				

Table 43 - PPP Reporting – Operational Costs

Note: As the atypical expenditure, efficiencies and performance deductions (Omega) were not divisible by site the cross tot on line 4 for Alpha and Omega will not agree – the total included in the total column is correct for the Payments to the Concessionaire.

Line 4 – Payment to concessionaire

The figures on this line are taken directly from line 12 of table 42 and any significant changes from AIR16 have been commented on in the commentary to that table.

Alpha

The data is derived from the Contractors monthly invoice and can be split on a site-by-site basis and in each case represents the sum of the Unitary Charge payments (Capacity + Variable – Deductions) agreed with the Contractor.

It also includes atypical amounts as follows:

Quality Monitoring Change credit
EIB Step-down
Refund in respect of reorganisation costs
Total

[redacted]

Kinnegar

The data is provided as an aggregate of the monthly invoiced amounts by the Contractor to the Company. There are no atypical amounts recorded in the 2016/17 year.

Omega

The data is provided as an aggregate of the monthly invoiced amounts by the Contractor to the Company in respect of the Services. It includes the disputed amounts where the Contractor has not recognised the Performance Deductions made by the Authority and has not provided a credit note to the original invoice. During 2016/17 no performance deductions were recognised by the contractor.

In addition this line includes atypical amounts as follows:

Performance Deductions Re-Accrued
North Down and Ards Disinfection Change
Supplemental 4 Agreement
Change in Calibration Frequency
Credit releases
2016/17 out of spec sludges
Omega Adjudication
Other
Total

[redacted]

Line 5 - Payment by concessionaire to operating company

Alpha

This figure is equal to the figure quoted in Line 22a of Table 21. This figure will vary from year to year depending upon volumes of water dispatched, changes in the volumetric charge, deductions incurred and indexation.

Omega

This figure is equal to the figure quoted within Line 21a of Table 22. This figure will vary from year to year depending upon volumes of wastewater delivered, change in sludge volumes delivered for disposal, deductions incurred and indexation.

Kinnegar

This figure is equal to the figure quoted within Line 21a of Table 22. This figure will vary from year to year depending upon volumes of wastewater delivered, change in load delivered, deductions incurred and indexation.

Line 6 - Power

Power costs reported on this line reflect a facility breakdown of the power costs included in tables 21 and 22. This is taken directly from location codes in the Oracle system. In respect of the Kinnegar Concession the power costs are paid by the operating Company from the monthly payment from the Concessionaire.

Line 7 - Other direct costs

This line includes the cost of abstraction licences at each of the PPP Alpha sites. There are no other direct costs for Kinnegar or Omega.

Line 9 - General and support expenditure

General and support costs have been arrived at by running a report on P101 cost centre. Costs were allocated by scheme on the basis of percentage time spent by each staff member working on each scheme and in the case of consultancy based on actual invoices received. Costs were then allocated straight line across the number of sites included within each concession. No work giving rise to a general and support expenditure allocation was carried out on the Ballynacor Lagoons site during the year hence no costs have been attributed to this site.

Line 11 - Scientific services

Scientific services costs have been allocated to PPP sites on the basis of the percentage of samples attributable to each PPP site, an allocation of staff costs based on actual hours and operational contractor costs on the basis of estimated cost per site visit.

Line 12 - Rates

Alpha

Rates at water supply sites are based on water volumes. In order to allocate a proportion of the rates bill to the Alpha sites the volume of water supplied at each PPP site was taken as a percentage of the total NIW water supplied and this figure was multiplied by the total NIW rates cost.

Kinnegar

Kinnegar rates charge was taken directly from the rates bill.

Omega

The rates figure for each of the Omega sites was taken directly from the rates bills. The bill for the Duncrue site was allocated between PPP and NIW in line with the total area of the site occupied by PPP. PPP occupy 15% of the Duncrue site. The Ballynacor site rates have been split on a 65:35 wastewater to sludge split.

Line 13 - Estimated terminal pumping costs

This line reflects the power costs associated with Seagoe, Bullay's Hill (Ballynacor facility) and Briggs Rock, Millisle and Donaghadee (North Down Facility). These were derived from the Oracle system using the location code for each site.

Line 14 - Sludge costs

This line reflects the costs associated with the PPP sludge facilities at Duncrue Street and Ballynacor. It totals the costs included at line 5, 10, 11 and 12.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 44 OPA INPUT DATA
OVERALL PERFORMANCE ASSESSMENT

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2012-13	CG	2 REPORTING YEAR 2013-14	CG	3 REPORTING YEAR 2014-15	CG	4 REPORTING YEAR 2015-16	CG	5 REPORTING YEAR 2016-17	CG	6 REPORTING YEAR 2017-18	CG	7 REPORTING YEAR 2018-19	CG	8 REPORTING YEAR 2019-20	CG	9 REPORTING YEAR 2020-21	CG
A	WATER SUPPLY																				
	DG2 PROPERTIES RECEIVING PRESSURE/FLOW BELOW REFERENCE LEVEL																				
1	Total connected properties at year end	nr	0	817,960	A2	824,974	B2	828,060	A2	839,710	A2	852,399	A2								
2	Properties below reference level at end of year	nr	0	1,420	B3	1,257	B3	1,082	B3	900	B3	862	B3								
3	% of total properties at risk of low pressure (OPA Low pressure value)	%	2	0.17	B3	0.15	B3	0.13	B3	0.11	B3	0.10	B3								
	DG3 PROPERTIES AFFECTED BY UNPLANNED INTERRUPTIONS																				
4	More than 6 hours	nr	0	10,487	B3	6,742	B3	43,767	B3	8,699	A3	5,128	A3								
5	More than 12 hours	nr	0	2,607	B3	1,195	B3	25,693	B3	841	A3	494	A3								
6	More than 24 hours	nr	0	1,554	B3	12	B3	13,788	B3	32	A3	0	A3								
7	Total connected properties at year end	nr	0	817,960	A2	824,974	B2	828,060	A2	839,710	A2	852,399	A2								
8	OPA supply interruption value	nr	2	1 98	B3	0.97	B3	11.72	B3	1.14	A3	0 66	A3								
	DRINKING WATER QUALITY																				
9	% iron compliance at consumers tap	%	2	97 36	A1	98.28	A2	98 90	A2	98.40	A2	98 66	A2								
10	% manganese compliance at consumers tap	%	2	99 83	A1	99.79	A2	99 82	A2	99.89	A2	99 84	A2								
11	% aluminium compliance at consumers tap	%	2	99 59	A1	99.60	A2	99 80	A2	99.25	A2	99 36	A2								
12	% turbidity compliance at consumers tap	%	2	99.70	A1	99.84	A2	99 85	A2	99.73	A2	99 95	A2								
13	% faecal coliforms compliance at consumers tap	%	2	99 89	A1	99.86	A2	99 99	A2	99.98	A2	100 00	A2								
14	% trihalomethanes compliance at consumers tap	%	2	97 50	A1	98.50	A2	99 00	A2	99.74	A2	96 94	A2								
15	Average overall compliance figure (Drinking Water Quality OPA value)	nr	2	98 98	A1	99.31	A2	99 56	A2	99.50	A2	99.13	A2								
B	SEWERAGE SERVICE																				
	DG5 SEWER FLOODING - OVERLOADED																				
16	Flooding incidents in the year (overloaded sewers)	nr	0	189	B2	6	B2	29	B2	4	B2	3	B2								
17	Flooding incidents (overloaded sewers attributed to severe weather)	nr	0	181	B2	5	B2	3	B2	1	B2	2	B2								
18	Number of domestic properties connected to sewerage system	000	1	623.3	A2	628.3	B2	630 0	A2	638.1	A2	648 6	A2								
19	% of domestic properties flooded by overloaded sewers (Overloaded sewers OPA value)	%	4	0 0013	B2	0.0002	B2	0.0041	B3	0 0005	B3	0.0002	B2								
	DG5 SEWER FLOODING - OTHER CAUSES																				
20	Flooding incidents (other causes - equipment failures)	nr	0	15	B2	14	B2	2	B2	1	B2	1	B2								
21	Flooding incidents (other causes - blockages)	nr	0	22	B2	36	B2	38	B2	34	B2	38	B2								
22	Flooding incidents (other causes - collapses)	nr	0	4	B2	5	B2	12	B2	3	B2	8	B2								
23	Number of domestic properties connected to sewerage system	000	1	623.3	A2	628.3	B2	630 0	A2	638.1	A2	648 6	A2								
24	% of domestic properties flooded by other causes (Other causes OPA value)	%	4	0 0066	B2	0.0088	B2	0.0083	B3	0 0060	B3	0.0072	B2								
	DG5 PROPERTIES ON THE FLOODING REGISTER																				
25	2 in 10 register at end of year	nr	0	30	B2	62	B2	60	A2	59	B2	61	B2								
26	Problems solved due to ESL funding	nr	0	20	A1	3	B2	5	A2	3	B2	3	B2								
27	1 in 10 register at end of year	nr	0	10	B2	8	B2	8	A2	7	B2	6	B2								
28	Number of domestic properties connected to sewerage system	000	1	623.3	A2	628.3	B2	630 0	A2	638.1	A2	648 6	A2								
29	% of domestic properties considered to be at risk of flooding by sewage (At risk OPA val	%	4	0 0088	B2	0.0110	B2	0.0110	A2	0 0103	B2	0.0103	B2								
C	SECURITY OF SUPPLY																				
	DG4 HOSEPIPE RESTRICTIONS																				
30	Hosepipe retrictions (OPA value)	%	0	0	A1	0	A1	0	A1	0	A1	0	A1								
	LEAKAGE																				
31	Leakage (Target)	nr	2	168 00		169.00		165 00		163.00		161 00									
32	Leakage (Actual)	nr	2	161.75	B4	167.21	B3	165 99	B3	161.99	B3	163.43	B3								
33	% of leakage target not met (Leakage OPA value)	nr	2	0 00	B4	0.00	A1	0 00	B3	0.00	B3	0.49	B3								
	SECURITY OF SUPPLY - ABSOLUTE PERFORMANCE																				
34	Security of supply index – company's actual based on planned level of service (Absolute performance OPA value)	nr	0	100	A2	100	A2	100	A2	100	A2	100	A2								
	SECURITY OF SUPPLY - PERFORMANCE AGAINST TARGET																				
35	Security of supply index - planned (target) levels of service	nr	0	97	A2	97	A2	100	A2	100	A2	100	A2								
36	Security of supply index - company's actual based on planned level of service	nr	0	100	A2	100	A2	100	A2	100	A2	100	A2								
37	% of target not met (Performance against target OPA value)	%	2	0 00	A2	0.00	A2	0 00	A2	0.00	A2	0 00	A2								
D	CUSTOMER SERVICE																				
	DG6 - RESPONSE TO BILLING CONTACTS																				
38	Number dealt with within 5 working days	nr	0	77,118	B2	78,398	B2	75,520	B2	75,462	B2	77,679	B2								
39	Total billing contacts	nr	0	77,051	B2	78,463	B2	75,545	B2	75,490	B2	77,698	B2								
40	% of billing contacts answered within 5 working days (DG6 OPA value)	%	2	100 09	B2	99.92	B2	99 97	B2	99.96	B2	99 98	B2								
	DG7 - RESPONSE TO WRITTEN COMPLAINTS																				
41	Total written complaints	nr	0	3,173	B2	2,505	B2	2,364	B2	2,269	B2	2,375	B2								
42	Number dealt with within 10 working days	nr	0	3,166	B2	2,498	B2	2,363	B2	2,266	B2	2,375	B2								
43	% of written complaints answered within 10 working days (DG7 OPA value)	%	2	99.78	A1	99.72	A1	99 96	A1	99.87	A1	100 00	A1								
	DG8 - BILLING METERED CUSTOMERS																				
44	Company or customer readings (or both)	nr	0	66,622	A1	66,840	A1	66,916	A1	67,366	A1	68,051	A1								
45	Total metered accounts	nr	0	110,164	A1	115,227	A1	118,732	A1	123,763	A1	127,807	A1								
46	Metered accounts excluded from indicator	nr	0	42,688	A1	47,784	A1	51,214	A1	55,875	A1	59,428	A1								
47	% of metered accounts which have meter based bills (DG8 OPA value)	%	2	98.73	A1	99.11	A1	99.11	A1	99.23	A1	99 52	A1								
	DG9 TELEPHONE CONTACT																				
48	Total of calls not abandoned	nr	0	216,006	A2	223,256	A2	226,204	A2	209,284	A2	216,015	A2								
49	Total calls received on customer contact lines	nr	0	219,399	A2	226,881	A2	230,847	A2	210,487	A2	217,023	A2								
50	% calls not abandoned (0.25 of DG9 OPA value)	%	2	98.45	A2	98.40	A2	97 99	A2	99.43	A2	99 54	A2								
51	All lines busy	nr	0	0	A2	0	A2	32	A2	159	A2	63	A2								
52	% calls not engaged (0.25 of DG9 OPA value)	%	2	100 00	A2	100.00	A2	99 99	A2	99.92	A2	99 97	A2								
53	Call Handling Satisfaction	nr	2	4 54	A1	4.63	A1	4 65	A1	4.59	A1										
E	ENVIRONMENTAL PERFORMANCE																				
	POLLUTION INCIDENTS																				
54	Number of High & Medium category pollution incidents (Sewage)	nr	0	18	A1	26	A1	25	A1	21	A1	22	A1								
55	Equivalent population served (resident)	000	2	2,107 96	C5	2,131.81	C5	2,110.77	C5	2,119.20	C3	2,098 83	C3								
56	Number of High and Medium sewage incidents per million resident population equivalent (pe) served (H&M sewage incidents OPA value)	nr	2	8 54	C5	12.20	C5	11 84	C5	9.91	C5	10.48	C5								
57	Number of Low category pollution incidents (Sewage)	nr	0	163	A1	188	A1	136	A1	117	A1	114	A1								
58	Number of Low sewage incidents per million resident population equivalent (pe) served (Low sewage incidents OPA value)	nr	2	77 33	C5	88.19	C5	64.43	C5	55.21	C5	54 32	C5								
59	Number of High & Medium category pollution incidents (Water)	nr	0	0	A1	0	A1	0	A1	0	A1	0	A1								
60	Winter population	000	2	1,842 61	C2	1,850.54	C2	1,862.72	C2	1,874.73	C2	1,887.10	C2								
61	Number of High and Medium water incidents per million resident population served (H&M water incidents OPA value)	nr	2	0 00	C5	0.00	C5	0 00	C5	0.00	C5	0 00	C5								
	SEWAGE - SLUDGE DISPOSAL																				
62	Percentage unsatisfactory sludge disposal (Sludge disposal OPA value)	%	2	0 00	A2	0.00	A1	0 00	A1	0.00	A1	0 00	A1								
	SEWERAGE SERVICE - BREACH OF CONSENT																				
63	WWTW Discharge consent % compliance (WWTW compliance OPA value)	%	2	1.10	C5	1.89	C5	1 54	C5	1.38	C5	1 08	C5								

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 45 KEY OUTPUTS
ENERGY CONSUMPTION AND GREENHOUSE GAS ACCOUNTING

	DESCRIPTION	UNITS	DP	1 NIW	CG	2 PPP	CG	3 NIW Total	CG
A	**ELECTRICITY CONSUMPTION**								
1	Grid electricity purchased (excluding renewable energy)	MW.hr	0	114,826	A2	72,024	A2	186,850	A2
2	Grid electricity purchased - renewable energy	MW.hr	0	86,323	A2	13,898	A2	100,221	A2
3	Non-renewable electricity generated and used	MW.hr	0	0	A2	0	A2	0	A2
4	Renewable electricity generated and used	MW.hr	0	686	A2	1,723	A2	2,409	A2
5	Total electricity consumption	MW.hr	0	201,836	A2	87,645	A2	289,480	A2
6	Non-renewable electricity generated and exported to the grid	MW.hr	0	0	A2	0	A2	0	A2
7	Renewable electricity generated and exported to the grid	MW.hr	0	1,142	A2	0	A2	1,142	A2
8	Total renewable enegry generated	MW.hr	0	1,828	A2	1,723	A2	3,551	A2
B	**GROSS ANNUAL OPERATIONAL GHG EMISSIONS**								
B.1	**Scope 1 Emissions**								
9	Direct emissions from burning fossil fuels (including natural gas CHP generation on si	$t.CO_2 e$	0	3,126	C3	3,306	A2	6,432	B3
10	Process and fugitive emissions	$t.CO_2 e$	0	4,002	C3	5,044	B2	9,046	B3
11	Transport: company owned or leased vehicles	$t.CO_2 e$	0	2,504	A2	139	A2	2,643	A2
B.2	**Scope 2 Emissions**								
12	Total grid energy used (including CHP electricity purchased).	$t.CO_2 e$	0	75,896	A2	42,373	A2	118,269	A2
B.3	**Scope 3 Emissions**								
13	Business travel on public transport and private vehicles used for company business	$t.CO_2 e$	2	616.10	A2	16.17	A2	632.27	A2
14	Outsourced activities (if not included in Scope 1 or 2) Energy and other	$t.CO_2 e$	2	0.00	A1	12,732.35	A2	12,732.35	A2
15	Not used								
16	Not used								
17	Gross operational emissions	$t.CO_2 e$	0	86,145	A2	63,610	A2	149,755	A2
C	**Net annual operational emissions**								
18	Exported renewables (generated on-site and exported)	$t.CO_2 e$	2	-373.60	A2	0.00	A1	-373.60	A2
19	Green tariff electricity purchased	$t.CO_2 e$	2	-35,569.51	A2	-5,726.73	A2	-41,296.24	A2
20	Net operational emissions	$t.CO_2 e$	0	50,201	B3	57,884	A2	108,085	A3
D	**ANNUAL OPERATIONAL GHG INTENSITY RATIO VALUES**								
21	Operational GHG per Ml of treated water	$t.CO_2 e/Ml$	3	0.175	B3	0.265	A2	0 207	A2
22	Operational GHG per Ml of sewage treated (flow to full treatment)	$t.CO_2 e/Ml$	3	0.404	B3	0.854	A2	0 574	B3
23	Operational GHG per Ml of sewage treated (based on water distribution input)	$t.CO_2 e/Ml$	3	0 264	B3	0.559	B3	0 376	B3
E	**RENEWABLE INCENTIVES**								
24	Revenue from renewable energy sales and incentives	£000	3	149 219	A2	0.000	A1	149 219	A2

Table 45 - Energy Consumption and Greenhouse Gas Accounting

Table 45 contains data relevant to the Company's energy consumption and greenhouse gas accounting as requested for the AIR17 return.

Table 45 has been populated in line with guidance provided by NIAUR and contains data sets both internal and external as required and as set out within the sections detailed below. Table 45 reports emissions generated by the Company and outsourced PPP concessions working for the appointed business in carrying out any part of its regulated activities.

Data has been provided in Table 45 for energy consumption, gross and net tonnes CO_2e of operational emissions, GHG intensity ratios and revenue from the sale of renewable electricity and other incentives.

Lines 1 – 8 Electricity Consumption

This section provides data relevant to the total electricity consumption within NI Water and PPP concessions, a breakdown by renewable and non-renewable energy sources and data related to company generated renewable electricity.

The Company has purchased and self-generated circa 35.45% of its total electricity consumption from renewable sources within the reporting period. Self-generated renewable electricity has been via Hydro, Solar schemes across several sites and a steam turbine at the Incinerator. The outputs are detailed in Table 1

Table 1

Site	kWhrs
Hydro	1,463,698
Steam	1,722,970
Solar PV Installations (56 Sites)	364,635

Further investigatory work is ongoing to enable installation of hydro and wind turbine systems at other sites. These will likely occur within the next Regulatory period.

The level of self-generation is further complemented by procurement of renewable electricity from the SEM. NI water has built into the electricity contract that around 35% of consumption would be from Renewable Energy Guarantees of Origin (REGO). This is achieved by placing a specific schedule of c280 sites on a green supply.

Lines 9 – 17 Gross Annual Operational GHG Emissions (Lines 15 and 16 not used)

This section provides gross annual operating GHG emissions in tonnes CO_2e within NI Water and PPP concessions, broken down as follows:

- direct emissions from burning fossil fuels;
- process and fugitive emissions and
- transport emissions

Emissions have been reported under Scope 1, 2 and 3 headings and these are detailed further below.

- **Scope 1** (lines 9-11) report on all emissions emitted directly from the company's appointed activities. This includes direct emissions from burning of fossil fuels, direct process emissions and transport owned or leased by the company.

- **Scope 2** (line 12) reports on all emissions indirectly emitted as a result of electricity usage.
- **Scope 3** (lines 13 - 14) reports on all other indirect emissions not included in scope 2. Scope 3 emissions will be those from business travel on public transport and private vehicle usage for company business (line 13)

Lines 18 – 20 Net Annual Operation Emissions

This section reports on net annual operational emissions derived from renewable energy generated onsite and then exported (line 18) and green energy purchased (line 19). These reductions have been subtracted from the gross emissions value (line 17) to provide a net operational emissions figure in (line 20).

Lines 21 – 23 Annual Operating GHG Intensity Ratio Values

This section provides annual operating GHG intensity ratios in tonnes CO_2e per mega litre for the provision of water and sewerage service using water and waste flows as a denominator. Two intensity ratios have been provided for sewerage service, one using table 14 data as a denominator and one using additional road drainage in-flow. Confidence grading around the latter figure is at B3 as the accuracy is not verifiable. Details of intensity ratios are included in Table 2

Table 2

Description	Unit	NIW	PPP	TOTAL	CG
Annual operational emissions intensity ratio per Ml of treated water	tonnes CO_2e/ ML	0.096	0.265	0.143	A2
Annual operational emissions intensity ratio per Ml of treated sewage (FFT)	tonnes CO_2e/ ML	0.404	0.854	0.574	B3
Annual operational emissions intensity ratio per Ml of treated sewage (DI Input)	tonnes CO_2e/ ML	0.264	0.559	0.376	B3

Calculations for the tonnes CO_2e/ML intensity ration have been generated from the UK Water Industry Carbon Accounting Workbook 11.0 (March 2017) outputs using data from AIR17 Table 10 and Table 14. The confidence grading for the FFT is at B3 due to uncertainty over the accuracy of the data provided.

Line 24 Renewable Incentives

This section provides data relevant to Company income from renewable electricity sales and associated incentives such as ROC revenue.

Confidence Grades

Confidence grades have been assigned for each line of data and these are based on the criteria set out in the Introduction to the Annual Information Return Reporting Requirements and guidance within the UK Water Industry Carbon Accounting Workbook 11.0

Processing rules and Emissions Conversion Factors

The Company has provided output data within Table 45 as calculated using the Water UK Carbon Accounting Workbook Version 11.0 (March 2017) for greenhouse gas emissions associated with the provision of water, wastewater, sludge disposal, administrative function and transport in its AIR17 return.

Data sources for the AIR17 return have been generated from supplier's monthly consumption figures associated with the use of electricity, gas and other fuels where data is attainable. Estimations have only been used where there is deemed material impact and enough historical information is available with which to estimate quantities.

All energy conversions have been derived from the Carbon Accounting Workbook 11.0 and are aligned to the DECC/Defra guidelines using the relevant emissions factor for kg of CO_2 per measured unit of energy. The calculations are carried out within locked cells in the Carbon Accounting Workbook 11.0

Gross operational emissions reported in Table 45 are the company's total carbon emissions resulting from operational activities.

Nett operational emissions reported in Table 45 are a calculation of gross operational emissions taking into account emissions reductions for on-site renewable energy that is exported and renewable energy that has been purchased.

The $t.CO_2e$/ML GHG intensity output figure for treated water emissions includes all carbon emissions from the abstraction, treatment and distribution of water, associated administrative and transport emissions divided by the volume of treated water.

The $t.CO_2e$/ML GHG intensity output figure for treated wastewater includes all carbon emissions from wastewater pumping, wastewater treatment, sludge treatment and disposal, and associated administrative and transport emissions divided by the volume of wastewater treated.

The GHG intensity figures for treated water and wastewater for the calculations above have been derived from the volumes of water and wastewater as reported in tables 10 and 14 of the Company's AIR17 data.

Assumptions

The Company has assumed that the boundary for data collection is any activity associated with the operation of the appointed business. This will include all areas where the company has direct management responsibility such as the PPP concessions.

Additional Commentary

The Company can provide details of planned future work in carbon accounting, carbon management, mitigation and adaptation. This development is linked to the Company's developing climate change strategy and in particular, it is aligned to Company reporting under the new UK Government Legislation, the Carbon Reduction Commitment Energy Efficiency Scheme (CRCEES).

Assistance to the Auditor and Reporter

The Company has assisted the Auditor to enable informed judgments about the validity of energy usage and carbon emissions return data.

The Company has assisted the Auditor to confirm that the reporting methodology has been applied correctly and has assisted in the audit process as required to confirm that:

- the Company has adhered to the correct carbon accounting boundaries;
- the Company has used appropriate greenhouse gas conversion factors;
- the Company has appropriate and documented systems, management responsibly and sign off, for its carbon accounting submissions;

- the Company can validate the assumptions made and the reasons behind any omissions; and
- The Company will assist the Reporter to enable informed judgments about the validity and necessity of returned data.

Omissions

The following areas have been omitted from the AIR17 submission due to inability to source or lack of access to data.

- Supply chain, embedded and 'short cycle' emissions or those from non-appointed business activities have not been included in the return.
- Outsourced activities from call centres and maintenance contractors.
- Emissions from leakage/maintenance of refrigerant gases from refrigeration and air conditioning equipment.

The GHG emissions associated with the omissions above are believed to be a very small part of the overall GHG emissions reported and as such have no material impact on the data provided. The GHG omissions will be addressed in year to enable a fuller return for AIR17 reporting only if deemed in further discussion to have a material impact on the emissions level.

Green Purchased Electricity Adjustment

Green Tariffs are electricity tariffs marketed as having environmental credentials. Defra/BEIS (formally DECC) recognise as green those tariffs which comply with the 'Good Quality' Criteria specified on pages 51 and 52 of the 'Defra/DECC's Guidance on How to Measure and Report your GHG Emissions' published in Sept 2009.

The company has evidence verified by Capture Carbon to support the 100,221,437 kWhrs recorded in CAW 11.0 sourced from 100% renewable electricity generation for the period 01.04.16 to 31.03.17. The renewable electricity generation is verified by Renewable Energy Guarantees of Origin (REGOs) issued by the UK Office of Gas and Electricity Markets (Ofgem).

The company for AIR13 to AIR16 purchased green energy by the same principal though did not have the appropriate evidence to support the green energy as being verified by REGOs.
As the inclusion of green energy in CAW 11.0 drastically reduces the Net Operational Emissions, the company has included Table 3 detailing the change in emissions and other applicable data from AIR13 to AIR17 inclusive had the green purchased energy been supported by REGOs and included in all CAWs since 2013.

Table 4 demonstrates the change in Annual operational GHG intensity ratio values as supported by REGO accredited green purchased electricity.

Table 3

Description	Unit	AIR13	AIR14	AIR15	AIR16	AIR17
Gross Operational Emissions	tonnes CO_2e	184,170	168,108	187,099	175,585	160,447
Green Tariff electricity purchased reduction	tonnes CO_2e	-20,589	-43,511	-74,482	-54,112	-41,296
Net Operational Emissions	tonnes CO_2e	162,953	123,969	111,526	120,327	118,778

Table 4

description	Unit	AIR13	AIR14	AIR15	AIR16	AIR17
Annual operational	tonnes	0.297	0.154	0.185	0.141	0.143

emissions intensity ratio per Ml of treated water	CO_2e/ ML					
Annual operational emissions intensity ratio per Ml of treated sewage (FFT)	tonnes CO_2e/ ML	0.531	0.410	0.561	0.467	0.574
Annual operational emissions intensity ratio per Ml of treated sewage (DI Input)	tonnes CO_2e/ ML	0.824	0.638	0.366	0.490	0.376

Data Quality Assurance Check – Table 45

On completion of the CAW, the applicable values from the homepage are populated in a data checklist. The values in the checklist are populated in the related cells of Table 45. A comparison on the two files is taken to ensure consistency.

The values populated in Table 45 being presented to the regulator are given a final data quality sign off by line management.

Green House Gas (GHG) Reduction

NIW has made strides to reduce GHG emissions from AIR16 reporting year to AIR17 reporting year by increasing its self-supply installations particularly in Solar PV. Also with the inclusion of a company driven process optimisation project with the main objective to reduce consumption within treatment sites. Development of Integrated Constructed Wetlands (ICW) to replace inefficient treatment works. The year 2016/17 in comparison to 2015/16 had less rainfall in Northern Ireland.

The company has also been able to provide evidence in the 2016/17 reporting year that the green purchased energy is certified REGO accredited electricity.

Taking all these factors in consideration alongside a reduction in the emission factors for 2016/17 against the emission factors for 2015/16 has seen an overall reduction in gross and net GHG emissions.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 46 SERVICEABILITY
SERVICEABILITY RETURN

	DESCRIPTION	UNITS	DP	1 REPORTING YEAR 2004-05	2 REPORTING YEAR 2005-06	3 REPORTING YEAR 2006-07	4 REPORTING YEAR 2007-08	5 REPORTING YEAR 2008-09	6 REPORTING YEAR 2009-10	7 REPORTING YEAR 2010-11	8 REPORTING YEAR 2011-12	9 REPORTING YEAR 2012-13	10 REPORTING YEAR 2013-14	11 REPORTING YEAR 2014-15	12 REPORTING YEAR 2015-16	13 REPORTING YEAR 2016-17	14 REPORTING YEAR 2017-18	15 REPORTING YEAR 2018-19	16 REPORTING YEAR 2019-20	17 REPORTING YEAR 2020-21
A	**WATER INFRASTRUCTURE**																			
1	Water population	000	2	1,710.06	1,735.00	1,732.85	1,748.53	1,775.11	1,790.16	1,798.48	1,808.82	1,819.47	1,827.79	1,840.54	1,850.27	1,861.58				
2	Total connected properties at year end	000	1		786.1	794.7	800.0	804.4	798.7	806.4	810.4	818.0	825.0	828.1	839.7	852.4				
3	Total length of mains	km	2		27,114.59	25,972.00	26,067.07	26,349.22	26,435.45	26,441.81	26,499.03	26,700.79	26,710.55	26,712.44	26,728.83	26,778.15				
4	Number of mains bursts (incl Active leakage)	nr	0			5,054	3,611	3,764	3,910	3,634	2,665	2,474	2,299	2,266	1,972	2,135				
5	Mains bursts per 1000km	nr	1		-	194.6	138.5	142.9	147.9	137.4	100.6	92.7	86.1	84.8	73.8	79.7				
6	Interruptions to supply greater than 3 hours resulting from equipment failure	nr	0	35,700	24,995	30,360	39,883	36,882	34,268	39,647	44,960	40,697	44,499	70,272	98,979	85,239				
7	DG3 Properties affected by interruptions >12 hrs (unplanned & unwarned)	nr	0	1,676	1,670	767	1,839	2,010	1,588	4,180	765	1,019	1,195	929	841	494				
8	DG3 Percentage properties affected by interruptions >12 hrs (unplanned & unwarned)	%	2	0.22	0.21	0.10	0.23	0.25	0.20	0.52	0.09	0.12	0.14	0.11	0.10	0.06				
9	Number of regulatory samples taken for Iron at customer taps	nr	0	1,962	1,971	1,928	2,012	2,124	2,036	1,736	1,732	1,710	1,876	1,896	1,876	1,868				
10	Number of regulatory Iron samples exceeding the drinking water standard PCV	nr	0	46	41	45	34	41	43	35	30	47	36	20	30	25				
11	Number of regulatory Iron samples exceeding 75% of the drinking water standard PCV	nr	0	108	72	71	64	66	76	55	50	74	62	43	54	45				
12	Percentage of regulatory Iron samples exceeding 75% of the drinking water standard PCV	%	2	5.50	3.65	3.68	3.18	3.11	3.73	3.17	2.89	4.33	3.30	2.27	2.88	2.41				
13	Customer contacts (Discoloured water)	nr	0					4,085	3,840	3,010	2,344	2,464	3,465	2,744	3,179	3,029				
14	Customer contacts per 1000 population (Discoloured water)	nr	2				-	2.30	2.15	1.67	1.30	1.35	1.90	1.49	1.72	1.63				
15	Distribution losses	Ml/d	2	141.90	127.76	118.74	111.38	131.49	140.55	130.66	122.02	115.44	127.31	126.08	122.08	123.55				
16	Company's overall serviceability assessment for water infrastructure	Text	N/A								Stable	Stable	Stable	Stable	Stable	Stable				
B	**WATER NON-INFRASTRUCTURE**																			
17	Number of regulatory samples taken for Turbidity at operational WTWs (excluding PPP)	nr	0					5,275	5,252	5,139	4,948	4,810	4,795	4,635	4,510	4,550				
18	Number of regulatory samples taken for Turbidity at operational WTWs which exceed 1.0 NTU (excluding PPP)	nr	0					9	16	11	15	8	11	10	3	6				
19	Number of regulatory samples taken for Turbidity at operational WTWs which exceed 0.8 NTU (excluding PPP)	nr	0	135	158	79	30	15	40	23	23	16	29	21	19	14				
20	Percentage of regulatory samples taken for Turbidity at operational WTWs which exceed 0.8 NTU (excluding PPP)	%	2					0.28	0.76	0.45	0.46	0.33	0.60	0.45	0.42	0.31				
21	Number of regulatory samples taken for THMs at customer taps	nr	0	1,057	952	704	752	765	784	432	408	392	396	391	388	392				
22	Number of regulatory THM samples exceeding the drinking water standard PCV	nr	0	358	239	150	243	141	30	8	3	10	6	4	1	12				
23	Number of regulatory THM samples exceeding 75% of the drinking water standard PCV	nr	0	578	439	280	441	289	57	32	21	52	31	34	44	53				
24	Percentage of regulatory THM samples exceeding 75% of the drinking water standard PCV	%	2	54.68	46.11	39.77	58.64	37.78	7.27	7.41	5.15	13.27	7.83	8.70	11.34	13.52				
25	Events at WTW resulting from treatment difficulties or ineffective treatment categorised as 'significant' or higher	nr	0				14	27	28	12	28	26	15	23	24	15				
26	Number of regulatory samples taken at Service Reservoirs for coliform bacteria	nr	0	18,258	18,232	17,914	17,581	17,408	17,429	16,966	16,862	16,690	16,118	15,640	15,433	15,213				
27	Number of regulatory samples taken for coliform bacteria at Service Reservoirs exceeding the drinking water standard PCV	nr	0	59	86	68	43	22	24	8	22	27	26	17	20	15				
28	Percentage of regulatory samples taken for coliform bacteria at Service Reservoirs exceeding the drinking water standard PCV	%	2	0.32	0.47	0.38	0.24	0.13	0.14	0.05	0.13	0.16	0.16	0.11	0.13	0.10				
29	Unplanned (reactive) maintenance	%	1										96.4	97.4	98.3	99.0				
30	Company's overall serviceability assessment for water non-infrastructure	Text	N/A								Stable	Stable	Stable	Stable	Stable	Stable				
C	**SEWERAGE INFRASTRUCTURE**																			
31	Total length of sewers	km	2		13,911.23	14,263.62	14,319.50	14,465.23	14,745.61	14,904.68	15,090.35	15,254.37	15,410.44	15,581.51	15,625.13	15,777.29				
32	Total number of rising main failures	nr	0					25	25	37	26	41	16	11	9	5				
33	Total number of gravity sewer collapses	nr	0					1,368	988	1,229	1,191	1,081	1,104	1,325	1,218	1,243				
34	Total number of sewer collapses	nr	0				677	1,393	1,013	1,266	1,217	1,122	1,120	1,336	1,227	1,248				
35	Sewer collapses per 1,000km	nr	1			-	47.3	96.3	68.7	84.9	80.6	73.6	72.7	85.7	78.5	79.1				
36	Total number of sewer blockages	nr	0				16,912	28,010	26,409	26,230	24,444	20,801	18,062	16,729	15,991	15,755				
37	Sewer blockages per 1,000km	nr	1			-	1,181.0	1,936.4	1,791.0	1,759.8	1,619.8	1,363.6	1,172.1	1,073.6	1,023.4	998.6				
38	Number of H, M pollution incidents from sewer network (CSOs, rising mains and foul sewers)	nr	0						38	34	30	14	14	17	11	15				
39	Number of H, M and L pollution incidents from sewer network (CSOs, rising mains and foul sewers)	nr	0						244	221	199	137	149	126	86	102				
40	Properties flooded in the year (other causes)	nr	0				366	23	5	28	23	41	55	52	38	47				
41	Areas flooded externally in the year (other causes)	nr	0				4,283	7,968	6,872	1,314	Not reported	3,212	3,348	4,379	3,889	-				
42	Total number of equipment failures repaired	nr	0				11,715	10,965	10,882	11,492	11,476	10,333	10,899	11,245	9,986	9,883				
43	Number of pumping station emergency overflows triggered by equipment failure	nr	0									21	18	22	15	8				
44	Number of sewer repairs	nr	0						1,013	1,266	1,217	1,122	1,120	1,336	1,227	1,248				
45	Company's overall serviceability assessment for sewerage infrastructure	Text	N/A								Stable	Stable	Stable	Stable	Stable	Stable				
D	**SEWERAGE NON-INFRASTRUCTURE**																			
46	% WwTW discharges not compliant with numeric consents	%	1	20.0	18.0	16.0	16.0	12.0	12.0	11.7	6.9	6.9	8.2	7.8	7.4	6.6				
47	% of total p.e. served by WwTWs not compliant with numeric consents excluding upper tier failures	%	2	37.00	33.20	23.10	15.50	9.80	8.60	5.08	4.80	1.68	2.40	1.85	1.71	1.31				
48	Number of BOD, SS and Ammonia sample results recorded for compliance reporting at WwTWs with numeric consents	nr	0	11,234	11,251	11,461	11,524	9,088	8,747	8,585	8,863	9,161	8,938	8,528	8,738	7,027				
49	Number of BOD, SS and Ammonia compliance sample results which exceeded their numeric consent value	nr	0	652	817	444	297	363	333	361	279	302	370	299	276	283				
50	Percentage of BOD, SS and Ammonia compliance sample results which exceeded their numeric consent value	%	2	5.80	7.26	3.87	2.58	3.99	3.81	4.21	3.15	3.30	4.14	3.51	3.16	4.03				
51	Number of WwTWs with one or more compliance sample result (BOD, SS or Ammonia) exceeding the numeric consent value	nr	0	104	132	115	99	103	98	102	91	76	87	60	55	44				
52	Small WwTW compliance (works greater than or equal to 20p.e. but less than 250p.e.)	%	2										72.64	76.87	80.72	83.99				
53	Unplanned (reactive) maintenance	%	1										94.5	96.4	97.8	97.6				
54	Company's overall serviceability assessment for sewerage non-infrastructure	Text	N/A								Stable	Stable	Stable	Stable	Stable	Stable				

Table 46 – Serviceability

Line 16 - Company's overall serviceability assessment for water infrastructure

The number of Burst Mains per 1000 km is 79.7 for AIR 17. The output figure for this serviceability indicator for AIR17 shows that the recent trend remains at a level near the lower control limit for Line 5. The burst rate shows evidence of a declining average trend over the last 5 years.

In relation to Line 6 “Interruptions to Supply > 3hrs resulting from Equipment failure”, NI Water believe the recent apparent deterioration since AIR 14 is maybe due to the transition to the CIMS methodology, this may require an adjustment to the reference level. Due to the analysis above, this indicator is considered Stable but we will continue to monitor trends and review as necessary.

All other metrics suggest that the ongoing trends demonstrated above are within their respective upper and lower tolerances (Note: Line 12 AIR 17 figure, for iron samples is below the lower limit.

The overall Serviceability assessment of the Water Infrastructure Network is Stable.

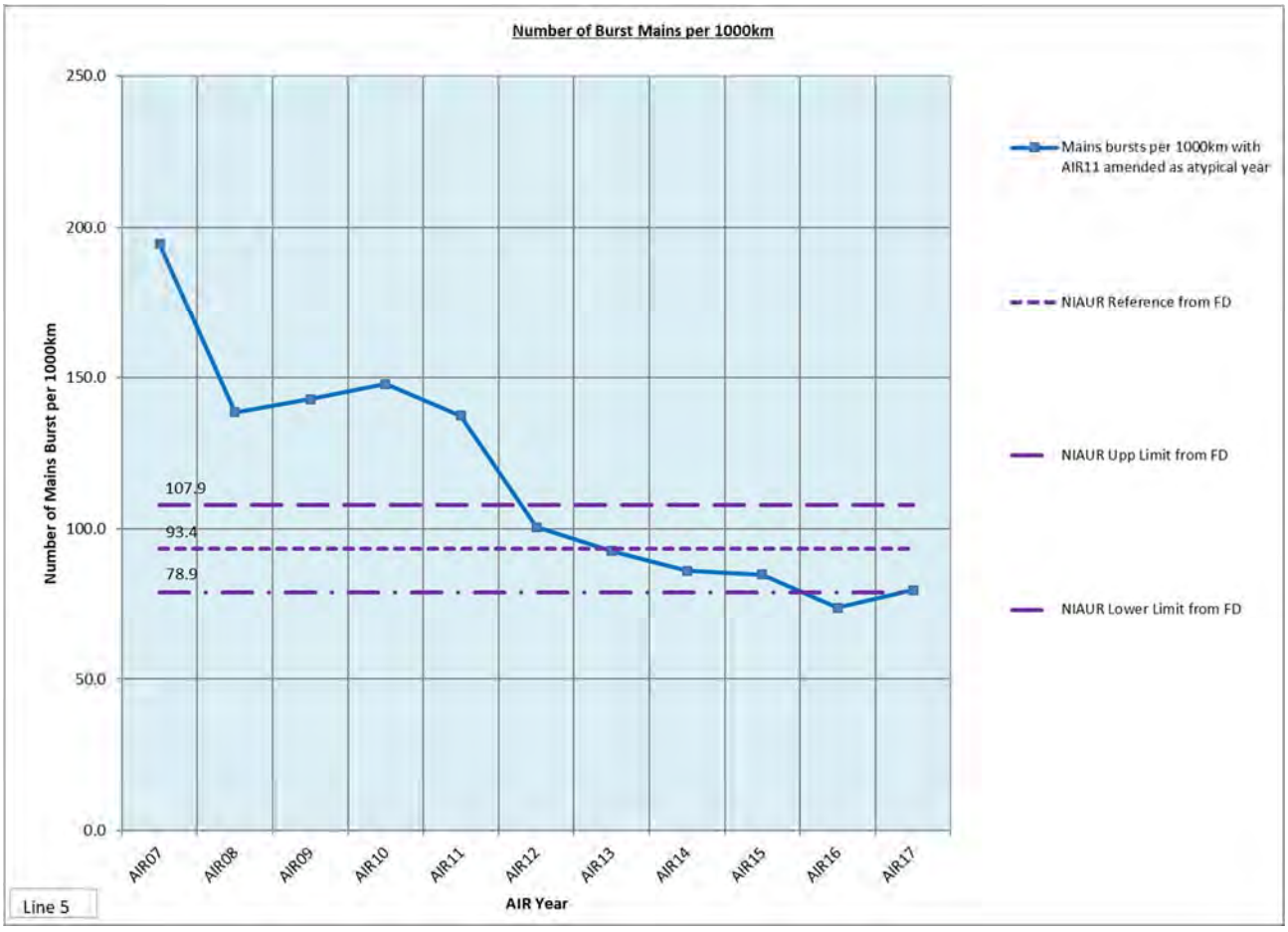
Summary Table

Serviceability Indicator	Line	Current Trend in Relation to Control Parameters	Output
No. of Bursts per 1000km	Line 5	The total annual number of bursts has fallen by approximately 40% in the last 5 years there is a slight increase in this year's figure but not thought to be significant as the AIR 17 return is still at the lowest threshold	Stable
Interruptions to Supply > 3hrs	Line 6	We believe the recent apparent deterioration since AIR 14 is maybe due to the transition to the CIMS methodology, this may require an adjustment to the reference level Due to the analysis above, this indicator is considered Stable but we will continue to monitor trends and review as necessary.	Stable
DG3 % of Properties Interrupted supply > 12 hrs	Line 8	Although this trend continues to improve, this may be more likely to be attributed to changes in work practice than asset performance.	Stable
% of iron Samples Exceeding 75% of PCV	Line 12	The AIR 17 output shows that the ongoing trend has fluctuated around the lowest control boundary for the last 3 years and is therefore stable	Stable

Serviceability Indicator	Line	Current Trend in Relation to Control Parameters	Output
Number of Customer Contacts per 1000 population (Discoloured Water)	Line 14	The graph demonstrates some fluctuation of the trend between the control limits The Company has arrived at a 'stable' assessment for this measure	Stable
Water Distribution Losses	Line 15	Explanatory factor	Explanatory factor
Overall Rating		**Final Explanatory Text**	**Stable**

Primary Indicator

Line 5 – Number of Burst Mains per 1,000km

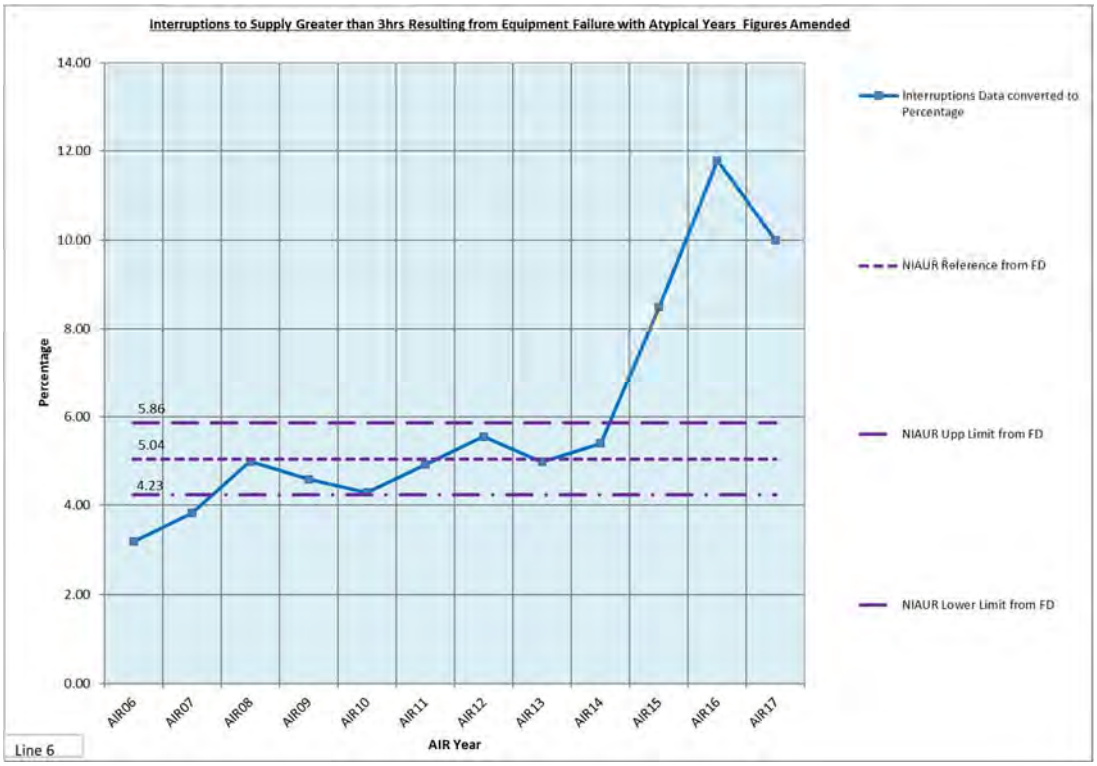


The number of Burst Mains per 1000 km is 79.7 for AIR 17
This assessment suggests that burst rates have dropped significantly since AIR10 with six consecutive previous year-on-year improvements to a failure rate averaging out at 40% or so lower than 2010

The output figure for AIR17 shows that the burst rate is at a level near to the lower control limit. This Serviceability Indicator is considered as Stable

Secondary Indicators

Line 6 – Interruptions to Supply > 3hrs resulting from Equipment failure



On 4 July 2014, the Company introduced the Central Incident Management System (CIMS), aimed at addressing any outstanding issues relating to the reliability of its data on supply interruptions. The new system ensures that more unplanned, unwarned interruptions are being captured than would previously have been the case and this is helping to improve the accuracy of NI Water's return.
The decision has been taken to exclude from the assessment, all properties affected by interruptions attributed to proactive work, new work and third party interference and

- all properties affected by planned and warned interruptions where it was not possible to positively ascertain the precise cause of interruption from the comments provided
- all properties affected by interruptions attributed to human error
- all properties affected by interruptions to facilitate third parties/NI Water contractors
- all properties affected by interruptions involving the 'above ground' infrastructure since this is the subject of a separate assessment in Table 46

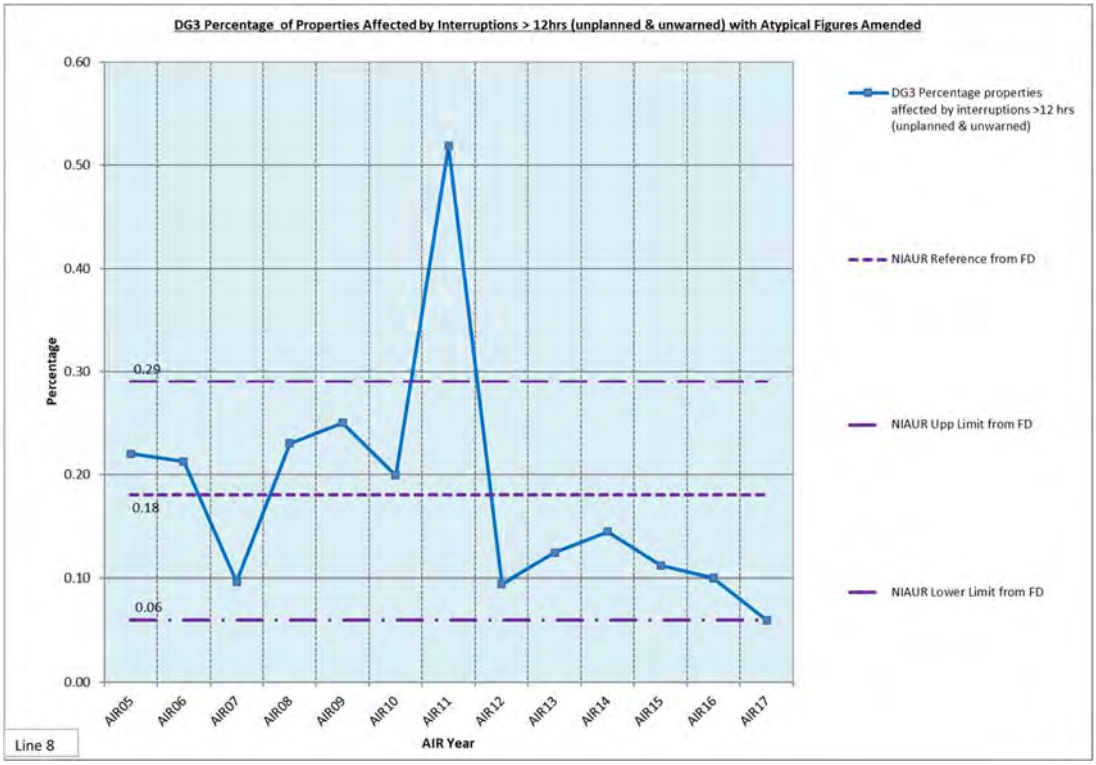
The AIR17 outturn has been calculated using the same methodology previously used to calculate the outturns for 2007/08 to 2015/16.

In 2016/17, (14%) fewer properties than the previous year had interruptions to supply of this duration, this decrease was mainly due to a reduction in the number of interruption events involving more than 2,000 properties
The AIR17 outturn was still more than double the AIR14 outturn of 41,412, the last outturn derived entirely from OMIS data and which was unaffected by extreme or atypical events. This was due in part to the introduction of the Central Incident Management System (CIMS) in July 2014 and associated changes in the processes used to capture the details of supply interruption events.

Another reason for the increase in outturn is likely to have been the weekly circulation of 'no water' complaint reports enabling Field Managers to determine more accurately, the times and affected properties associated with each interruption event. This is resulting in the identification of additional properties and longer durations than would possibly have been recorded for historical interruptions.

We believe the recent apparent deterioration since AIR 14 is maybe due to the transition to the CIMS methodology, this may require an adjustment to the reference level. Due to the analysis above, this indicator is considered as Stable but we will continue to monitor trends and review as necessary.

Line 8 – DG3 Percentage of Properties Affected by Interruptions > 12hrs



Conclusion

The following table lists the annual outturn numbers of unplanned interruption events lasting more than 3 hours, more than 6 hours and more than 12 hours in 2015/16 and 2016/17.

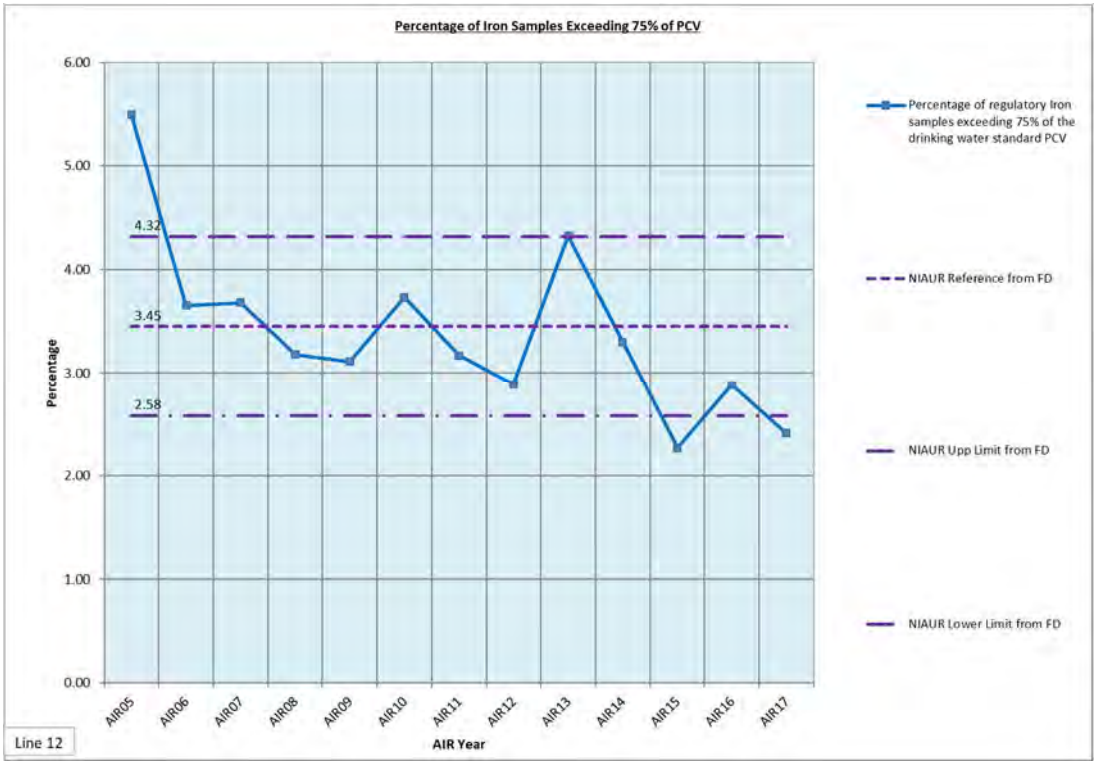
	2015/16	2016/17
More than 3 hours	781	779
More than 6 hours	119	95
More than 12 hours	17	12

The outturns are similar for unplanned interruption events lasting more than 3 hours, an indication that the number of asset-related unplanned interruptions has remained unchanged and that asset performance has continued to be stable. This is consistent with the conclusion reached for Table 46: Line 6: Interruptions to supply greater than 3 hours resulting from equipment failure. The outturn reductions for unplanned interruption events lasting more than 6 hours and more than 12 hours are therefore more likely to be associated with changes in work practice, aimed at reducing the duration of unplanned interruptions and driven by DG3 annual target reductions.

To date, the impact of initiatives targeted towards improving performance has been greatest on the 'more than 12 hour' time band as the main focus has been on those interruptions that last the longest and which therefore have the greatest potential to inconvenience customers. The Company has a Service Failure Analysis process where all unplanned interruption events lasting more than 12 hours are fully investigated to determine the root cause and to establish if any lessons can be learnt which could prevent a repeat occurrence of incidents in the future.

The conclusion is that although the annual outturn for Table 46: Line 8: DG3 Percentage properties affected by interruptions >12 hrs (unplanned & unwarned) continues to improve, this may be more likely to be attributed to changes in work practice than asset performance. The performance for this Serviceability measure is Stable.

Line 12 – Percentage of Iron Samples Exceeding 75% of PCV



The AIR 17 output shows that the ongoing trend has fluctuated around the lowest control boundary for the last 3 years and is therefore Stable.

Line 14 – Number of Customer Contacts per 1000 population (Discoloured Water)

This graph demonstrates some fluctuation of the trend between the control limits The Company has arrived at a 'Stable' assessment for this measure.

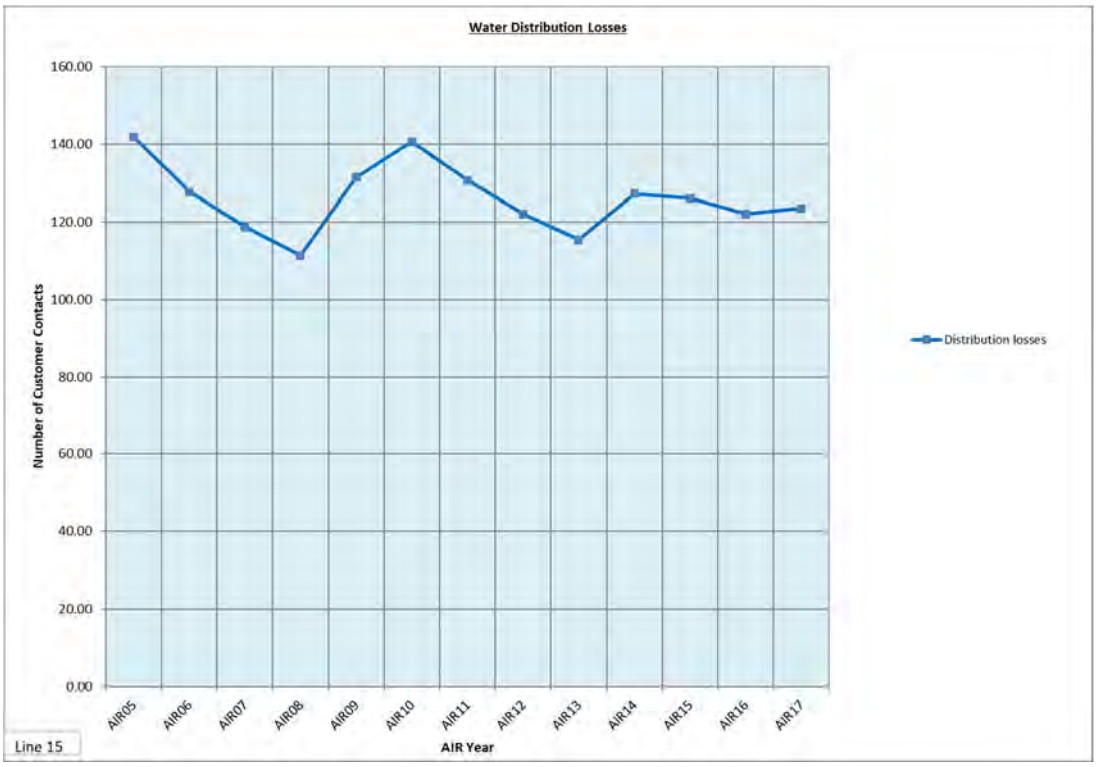
2016 Water Quality Contacts

Contact Category		Number of Contacts in 2016
Appearance	Colour	3029
	General	190
	Hardness	13
	Stained Washing	17
	White - Air	870
	White - chalk	382
Taste and Odour	Chlorinous	411
	Earthy/Musty	164
	Other	390
	Petrol/Diesel	41
	TCP	62
Illness		73
Particles		192
Animalcules		8
Boil Water		1
Other	Water Quality Concern - Campaigns	3
	Water Quality Concern - Incident Related	33
	Water Quality Concern - Lifestyle	5
	Water Quality Concern - Pets/Animals	7
	Water Quality Concern - Sample	671
	Water Quality Concern - Lead	318

Contact Category		Number of Contacts in 2016
	Water Quality (No Concern) Fluoride	0
	Water Quality (No Concern) Other	24
	Water Quality (No Concern) Water Hardness	43
	Water Quality (No Concern) Water Quality Rep	14
	Miscellaneous	0
	TOTAL	**6961**

Line 15 – Water Distribution Losses

This information as an explanatory factor for mains bursts which can be monitored for potential mains bursts trends



Distribution losses have risen in AIR 17 because of an increase in reported leakage however, the output for this period is comparable to the previous 3 years level of Water Distribution Losses

Detailed commentary regarding Leakage reporting is available in AIR 17 Table 10.

Line 30 – Company's overall serviceability assessment for water non-infrastructure

The serviceability assessment has been designated as Stable as the trend analysis associated with the basket of serviceability indicators, used to assess serviceability for water non-infrastructure, with the exception of THM's, are within, or have outperformed the control limits based on the latest AIR17 information.

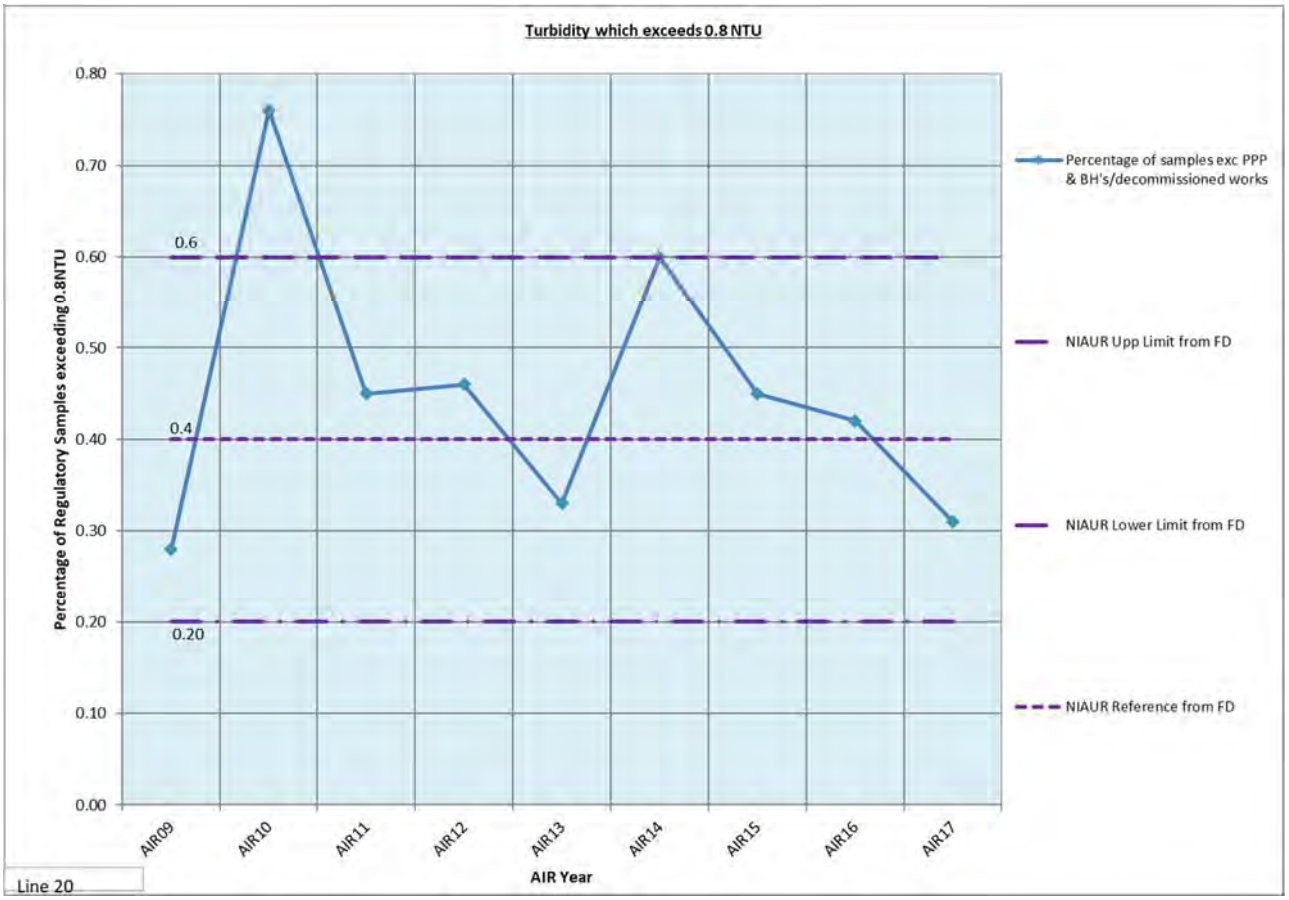
This can be seen in the serviceability graphs:

Primary Indicator

Line 20 – Turbidity which exceeds 0.8NTU – excluding PPP & BH's/decommissioned works

The AIR17 figure has improved in performance and is within the agreed Limits, therefore viewed as Stable.

As the figure for AIR16 was unusually elevated, the Regulator requested NIW carry out investigations as to the reason, resulting in the figure being reduced by the Regulator due to unrepresentative sample failures, such as issues with sample points or faulty analytical equipment, which can cause a sample to fail but are not reflective of the water quality, or the Serviceability of the WTW. The graph below depicts the amended reduced figure for AIR16.

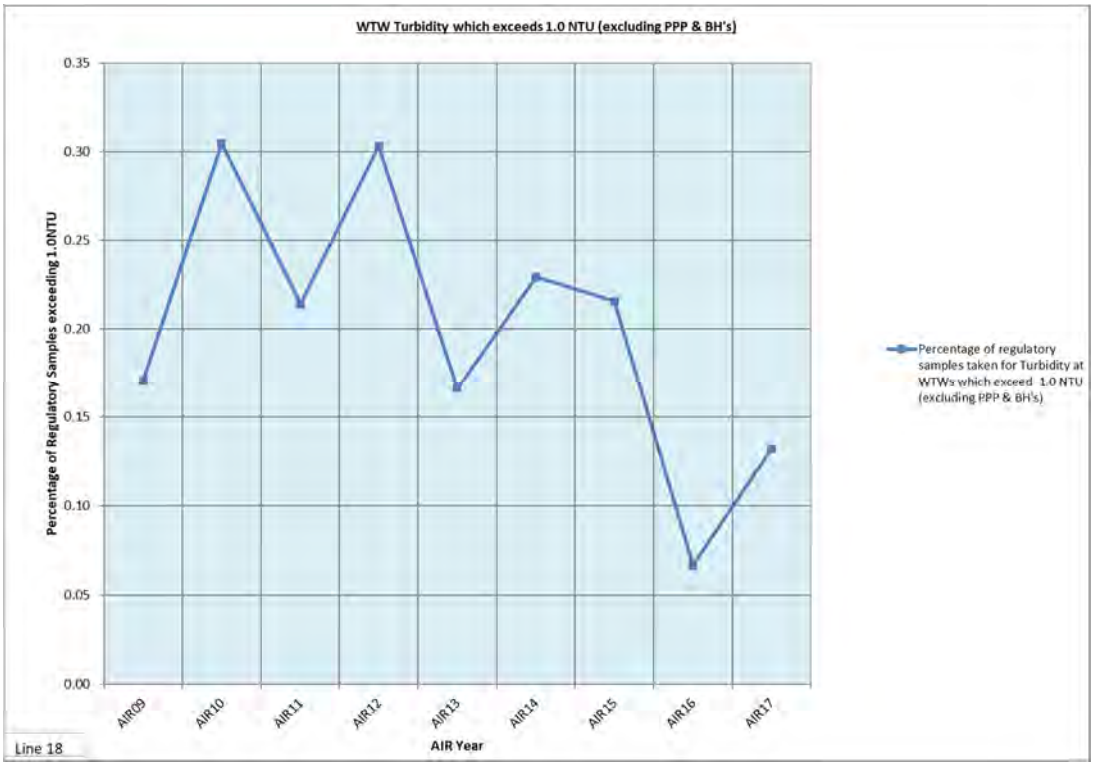


Secondary Indicators

Line 18 - WTW Turbidity which exceeds 1.0 NTU

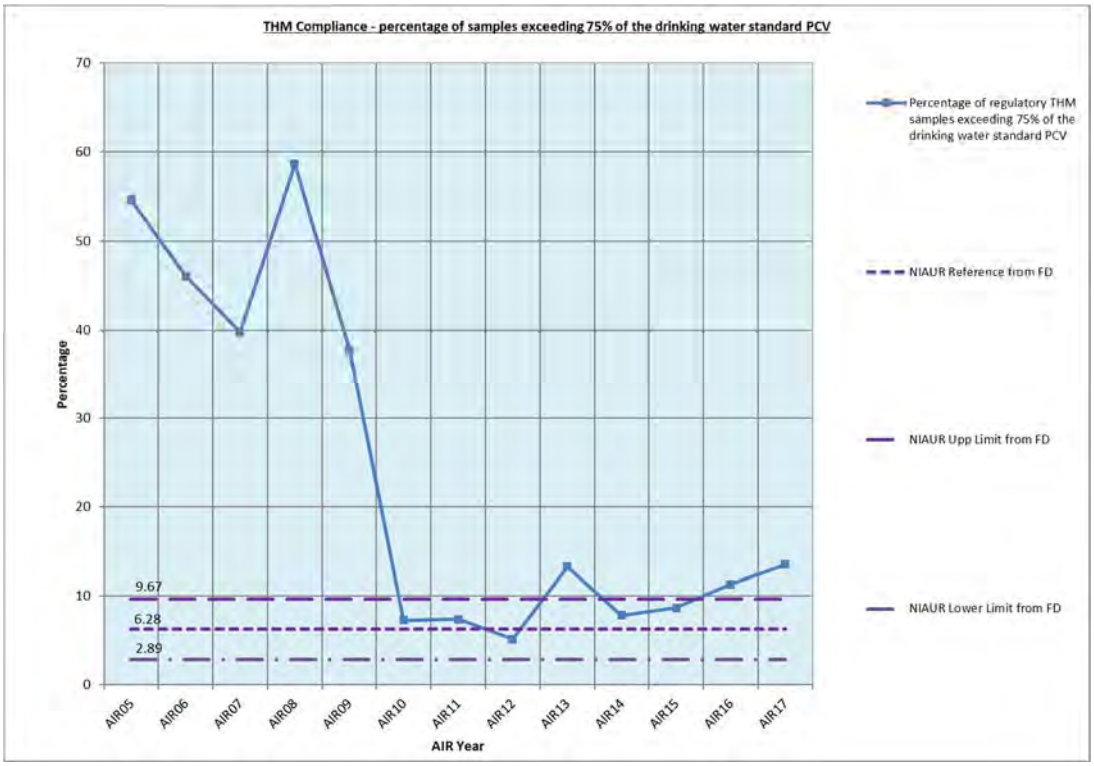
The "WTW Turbidity which exceeds 1.0 NTU – excluding PPP & BH's/decommissioned works" indicator is neither commented or have limits/references set by the Regulator. It has been included for illustrative purposes only.

As the figure for AIR16 was unusually elevated, the Regulator requested NIW carry out investigations as to the reason, resulting in the figure being reduced by the Regulator due to unrepresentative sample failures, such as issues with sample points or faulty analytical equipment, which can cause a sample to fail but are not reflective of the water quality, or the Serviceability of the WTW. The above graph depicts the amended reduced figure for AIR16.



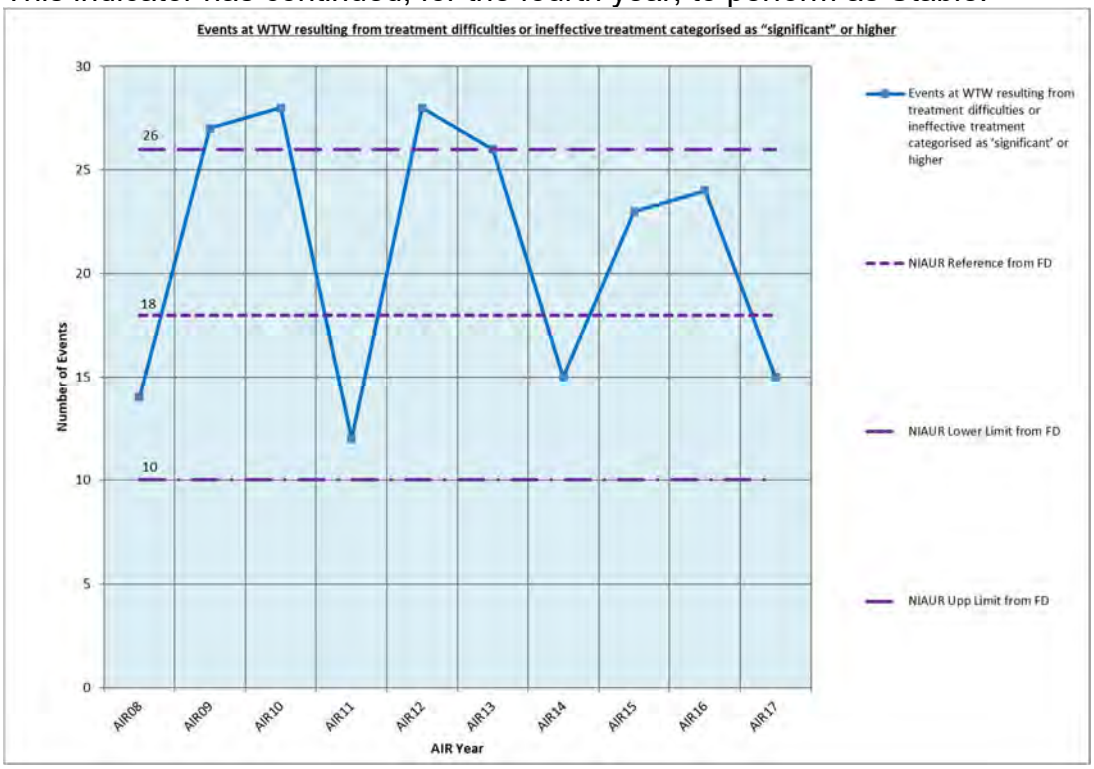
Line 24 - THM Compliance - percentage of samples exceeding 75% of the drinking water standard PCV

As the AIR17 figure has resulted in a significant cumulative rise above the Upper Limit for the second consecutive year, serviceability for this indicator is now seen as Deteriorating. However, as a Secondary Indicator it does not influence the overall Serviceability assessment. It has been noted that there was a slight increase in THM > 75% of the PCV in 2016/17, which can be attributed to 12no. exceedances of the THM PCV at customer taps supplied from the following WTW's – Derg, Dungonnell, Caugh Hill, Killylane and Rathlin. The WTWs have a final water operational monitor for THMs, which acts as a proactive alarm if 50% of the PCV (50µg/l) is measured. It should be noted that mains water temperature was higher in 2016 than in previous years, which would contribute to the increase in concentration and the further exceedance to greater than 75% of the PCV. THM Action Plans have been developed, and both THM results and the Action Plans are discussed on a monthly basis at the Water Quality Compliance Review Group.



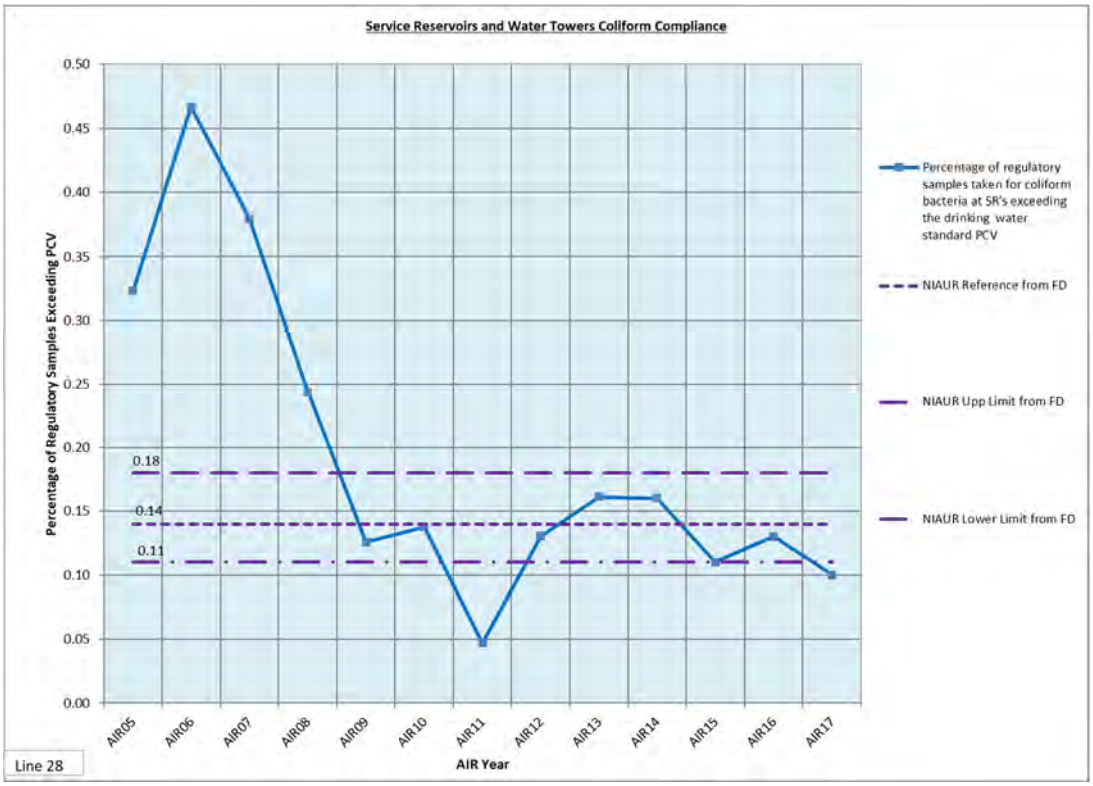
Line 25 - Events at WTW resulting from treatment difficulties or ineffective treatment categorised as "significant" or higher

This indicator has continued, for the fourth year, to perform as Stable.



Line 28 - Service Reservoirs and Water Towers Coliform Compliance – Secondary Indicator

This indicator has continued to show Stable performance over recent years.



Line 29 – Unplanned Reactive Maintenance (Water Non Infra) – Percentage of Availability of Critical Assets

The figures are based on telemetry data for the availability of critical items of plant. Data for this indicator has been previously relayed to the Reporter, who has accepted the methodology and rationale for Availability of Critical Assets. As this is relatively new reported data, Reference and Limits have not been set as a larger range of data is required before Serviceability can be reasonably assessed.

The reduction of items in a failed state over recent years may be due to routine proactive maintenance and/or the prioritisation of capital investment to sites/assets where most required.

Reporting restrictions

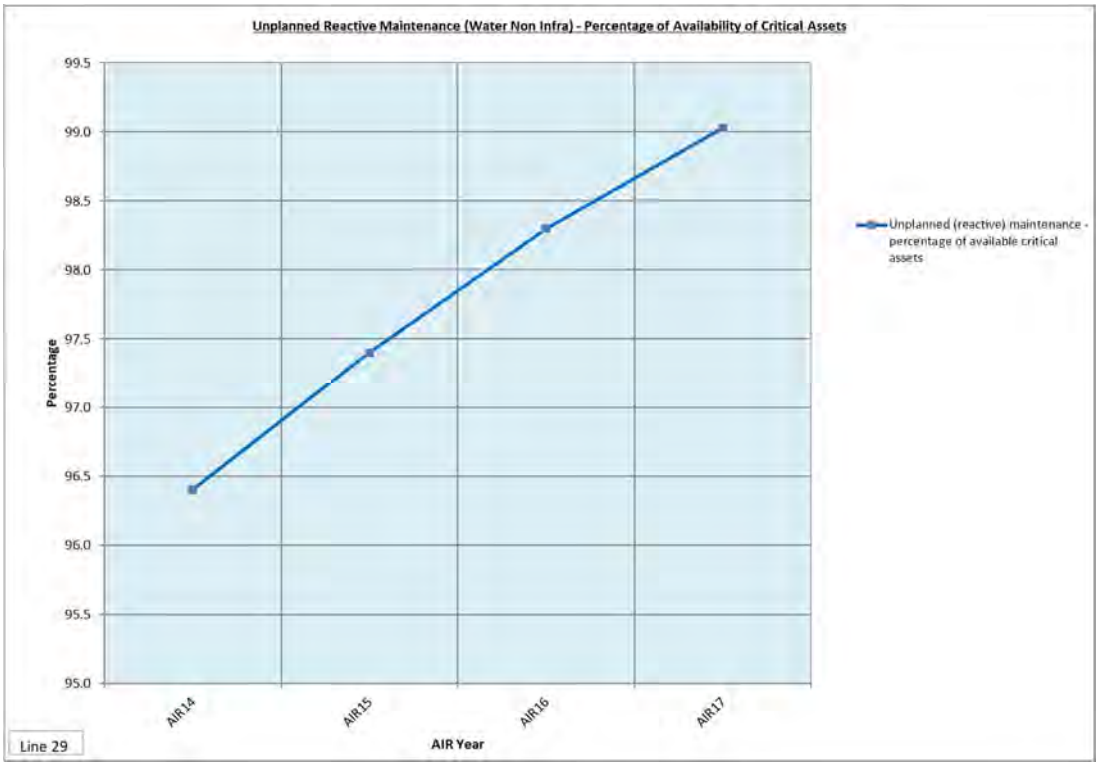
The ongoing development of the process for reporting of Water Non-infrastructure Unplanned (reactive) maintenance is expected to relate to the percentage availability of critical assets within this operational service area. The principle of operation has already been proven through the development of M&E Out-of-Service databases for some equipment.

The return has been allocated a confidence grading of B2. This is due to the factors listed:

- Telemetry signal anomalies and errors can adversely affect the data for individual items of equipment.
- Equipment that is registered as “tripped in auto”, “in hand” or “tripped in hand” is generally deemed unavailable. Generally, all equipment is operated automatically, so if equipment is switched to ‘in hand’ or is ‘tripped in hand’ it is not available for

auto operation as designed. Those assets that are only operated in a manual capacity i.e. always “in hand” can offer misrepresentative data unless filtered out.

- The report is only run on working days i.e. Mon – Fri figures in the report are based on a maximum of 20 days for a 4 week period.
- Reporting on a daily basis means that faults that are repaired prior to the end of the working day are not recorded.
- Due to the practice of using common alarm signals, mainly at Water Treatment Works (WTW), it is not possible to report on some items of individual plant.



Line 45 – Company's overall serviceability assessment for sewerage infrastructure

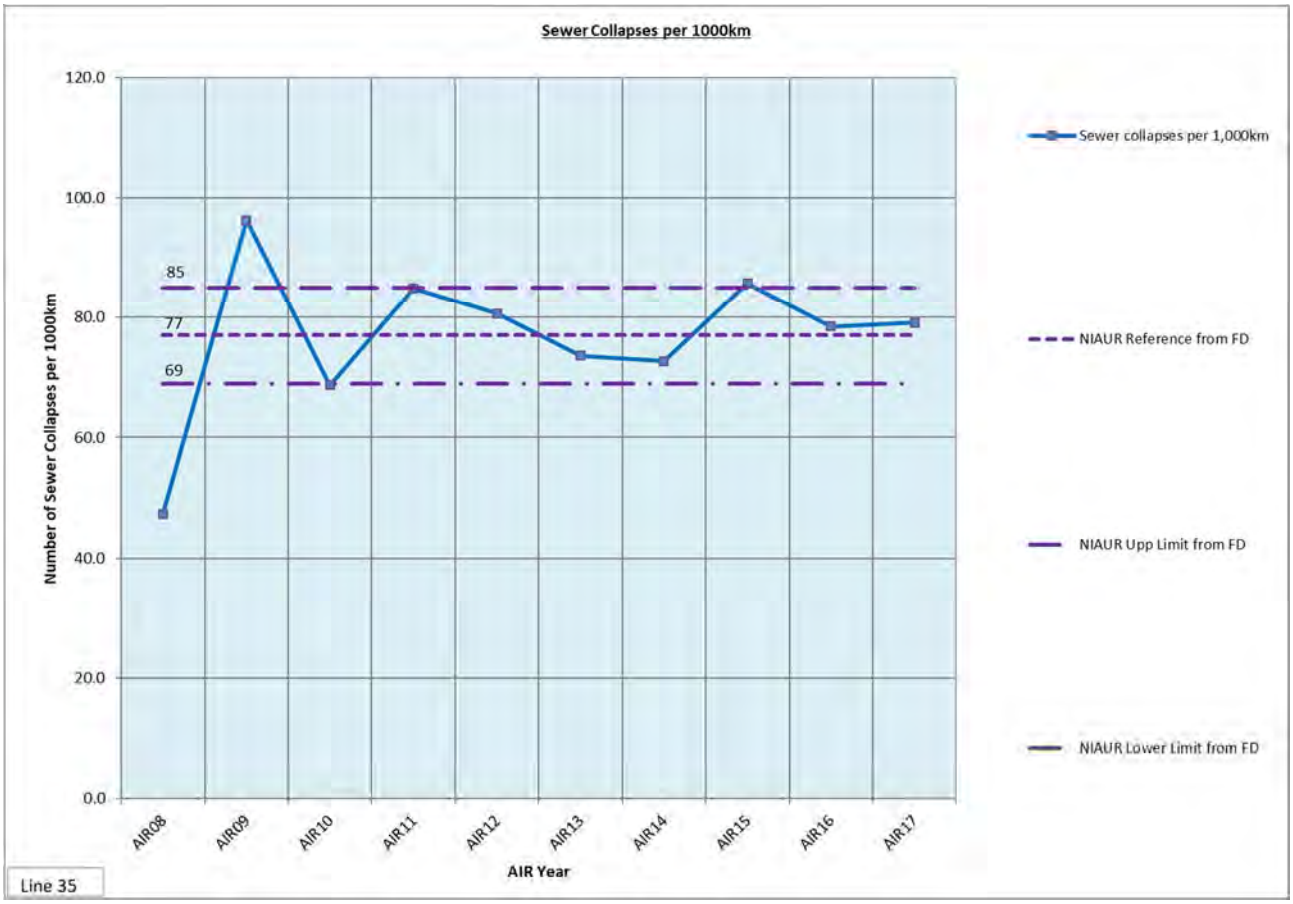
The serviceability assessment has been designated as Stable as the trend analysis associated with the basket of serviceability indicators, used to assess serviceability for sewerage infrastructure, are all within the control limits or under the lower control limits based on the latest AIR17 information.

Wastewater Infra Serviceability

Primary Indicator

Line 35 – Sewer collapses per 1,000km

This graph shows the number of collapses reported over the AIR return periods, which would indicate a stable output.

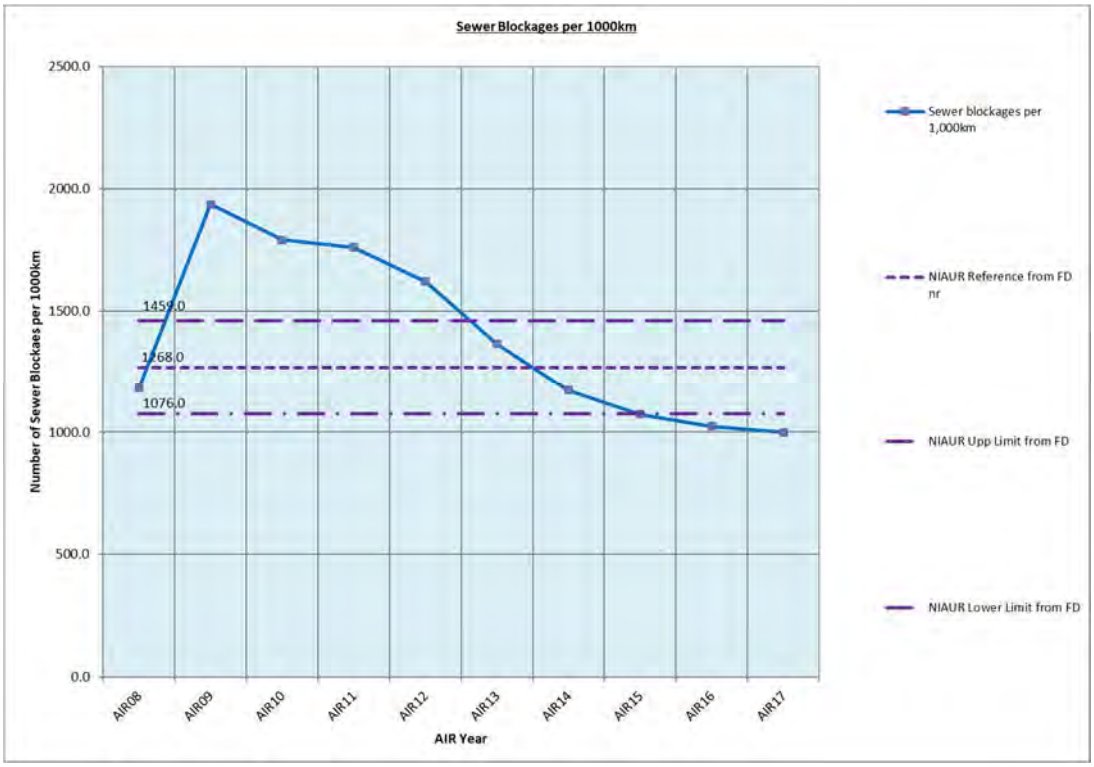


Secondary Indicators

Line 37 – Sewer blockages per 1,000km

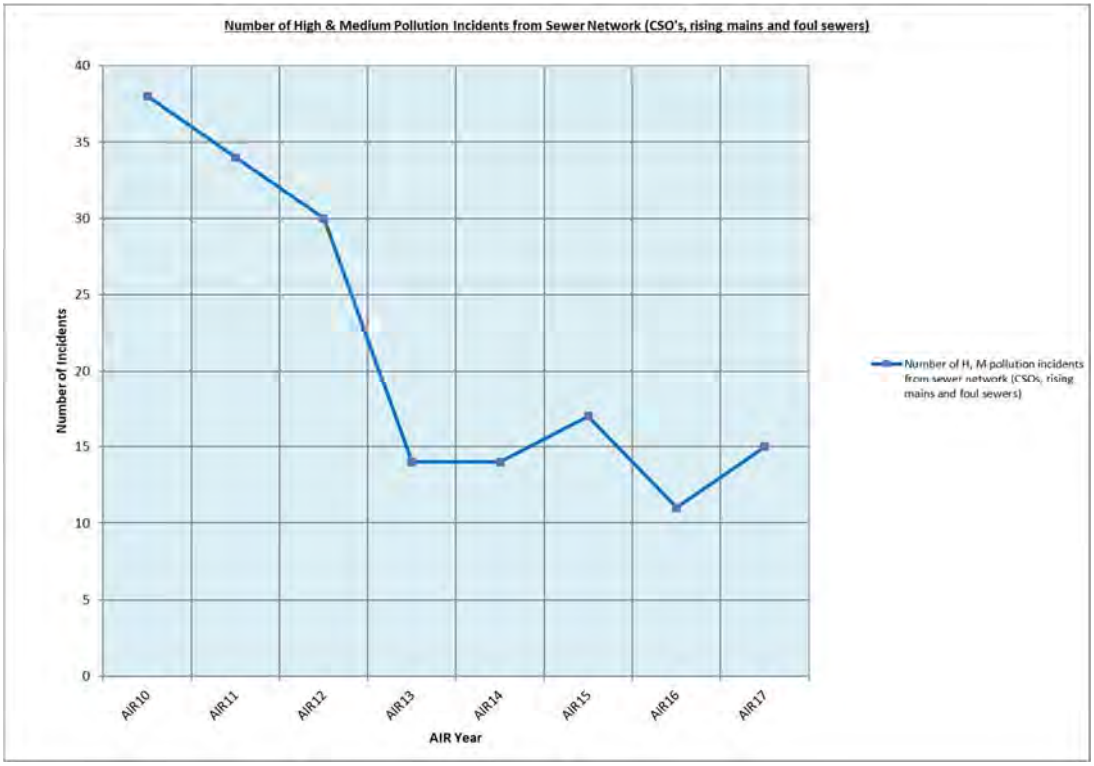
This graph indicates the number of blockages per 1000km over the different AIR return periods, which would indicate a stable output.

The reduction strategy set out by NI Water is making a positive impact in the reduction of sewer blockages. By the use of the hotspot tool, letter drops in certain catchment and an increase programme of CCTV. Is reducing the number of blockages.



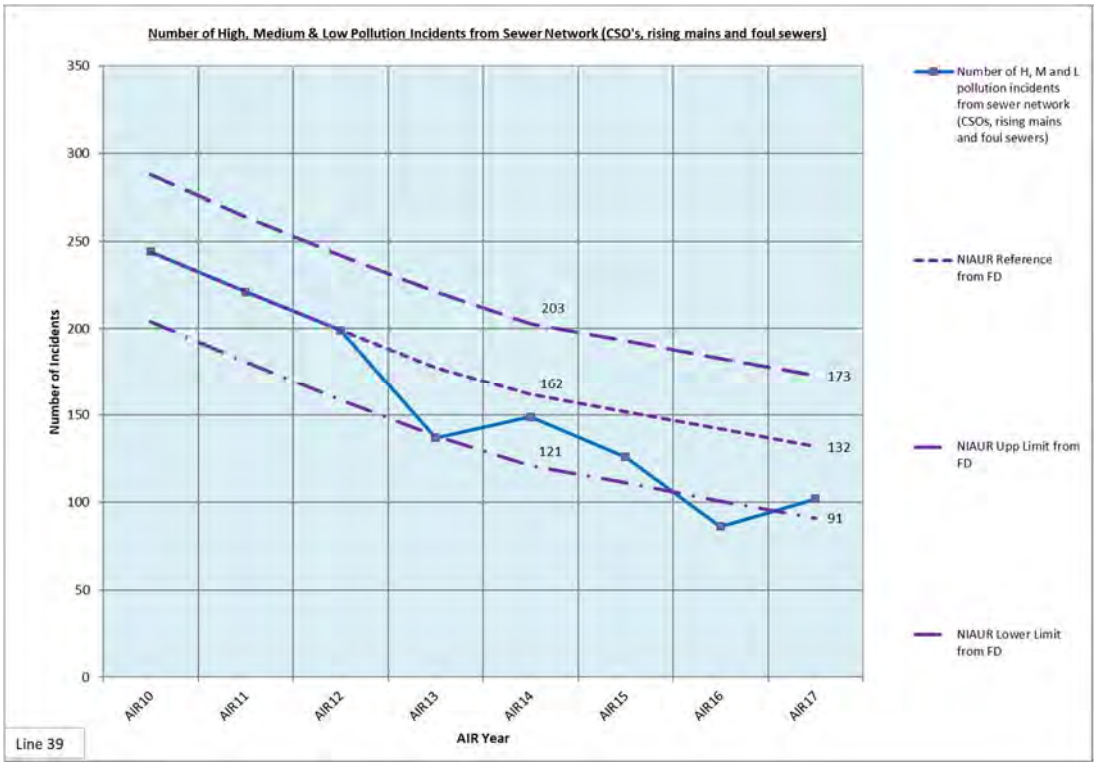
Line 38 – Number of H, M pollution incidents from sewer network

This graph has been submitted for information purposes only.



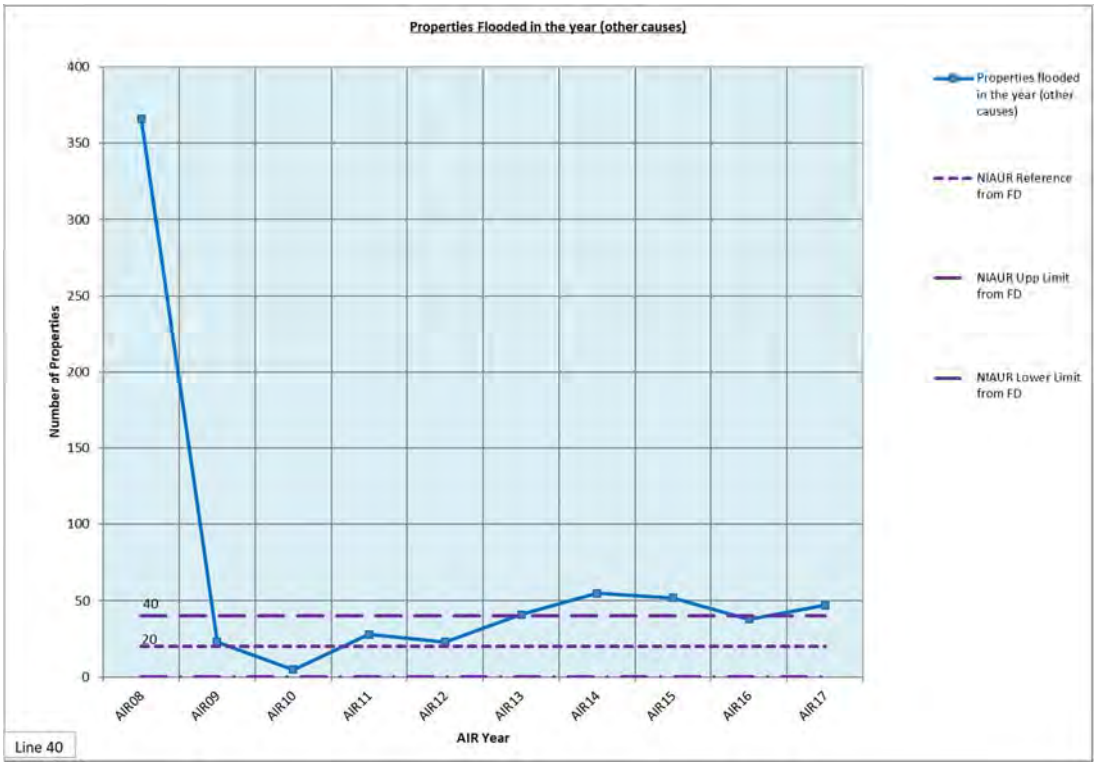
Line 39 - Number of H, M and L pollution incidents from sewer network

This graph shows the high, medium and low pollution incidents from the sewer network over the AIR return periods for CSO's, rising mains and foul sewers. Which would indicate a stable performance.



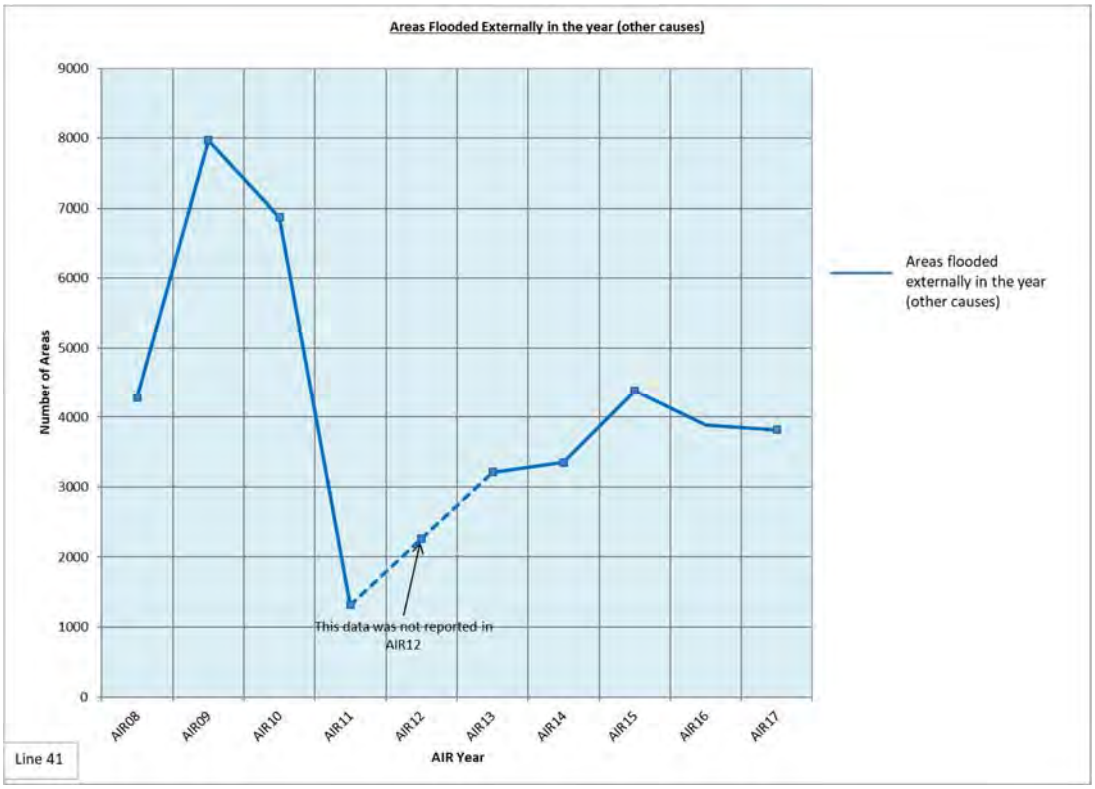
Line 40 – properties flooded in the year

This indicator is to monitor performance and not incorporated in the serviceability assessment. We have kept the reference level and control limits from the FD for information only.



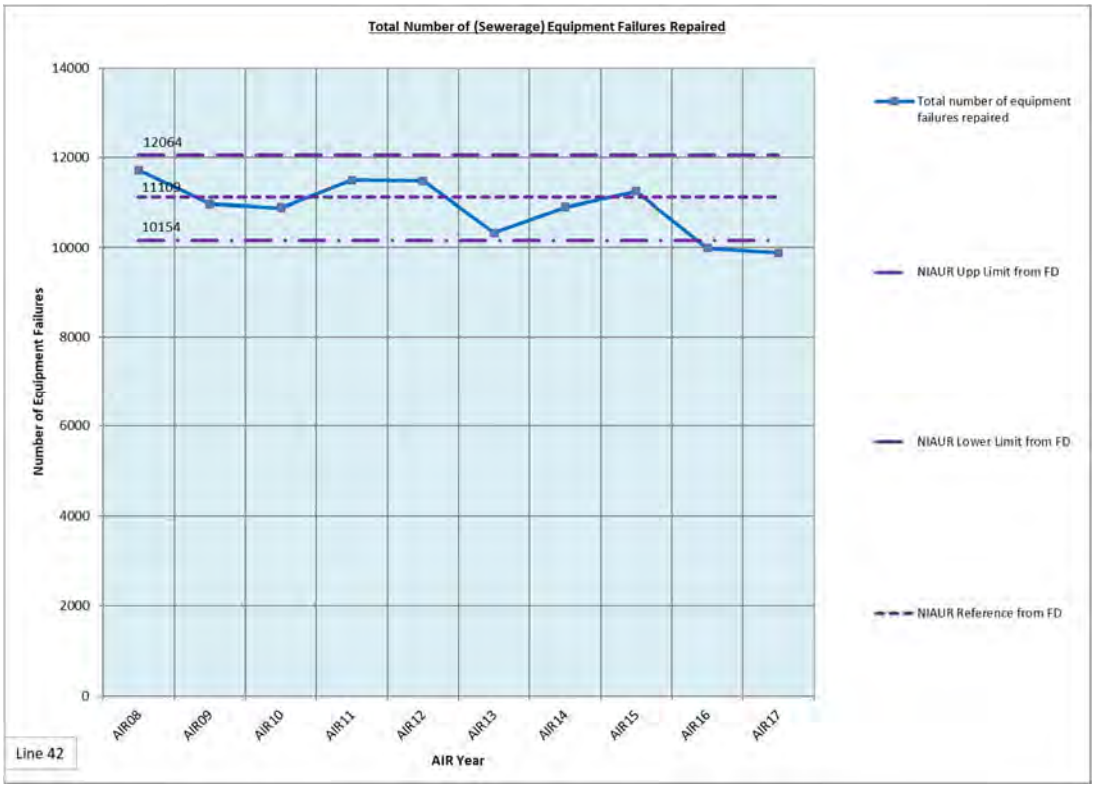
Line 41 – Areas flooded externally in the year

This graph is included for information only.



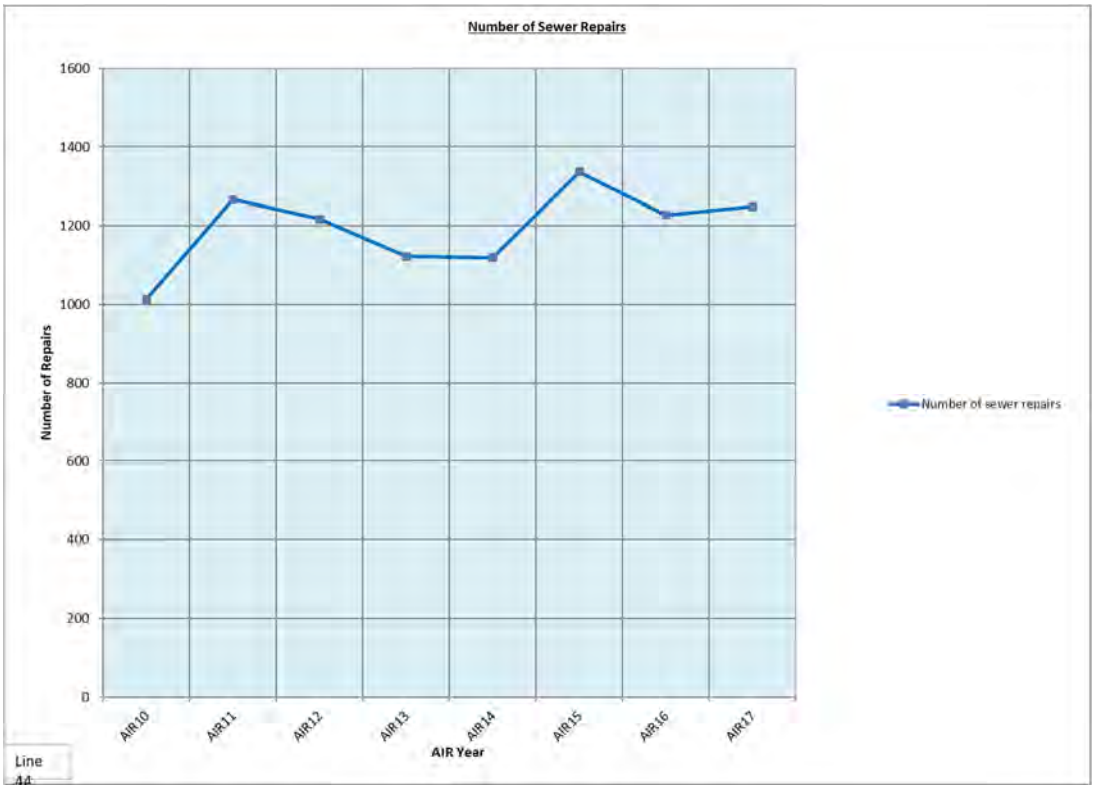
Line 42 – Serviceability - Stable

This graph shows the total number of sewerage equipment failures repaired. Which would indicate a stable performance.



Line 44 – Number of sewer repairs

This graph is included for information only.



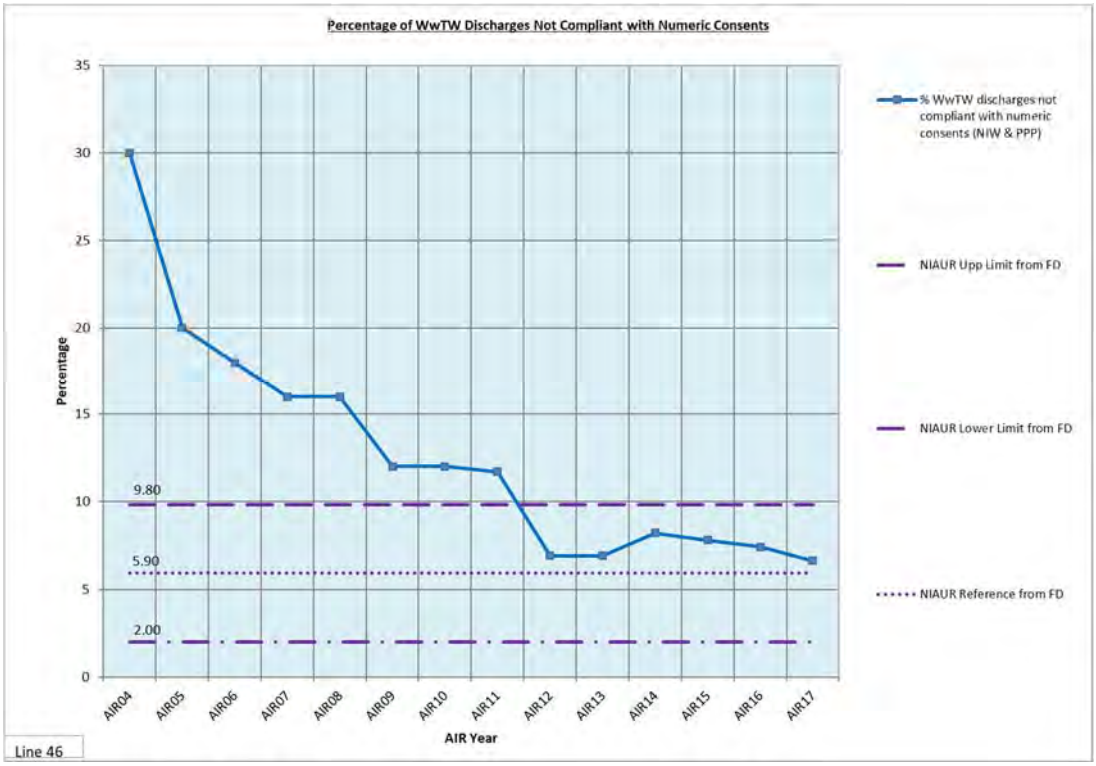
Line 54 – Company's overall serviceability assessment for wastewater non-infrastructure

The serviceability assessment has been designated as Stable as the trend analysis associated with the basket of serviceability indicators, used to assess serviceability for wastewater non-infrastructure, shows all the indicators are within or below control limits.

Primary Indicator

Line 46 – Percentage of WwTW Discharges Not Compliant with Numeric Consents

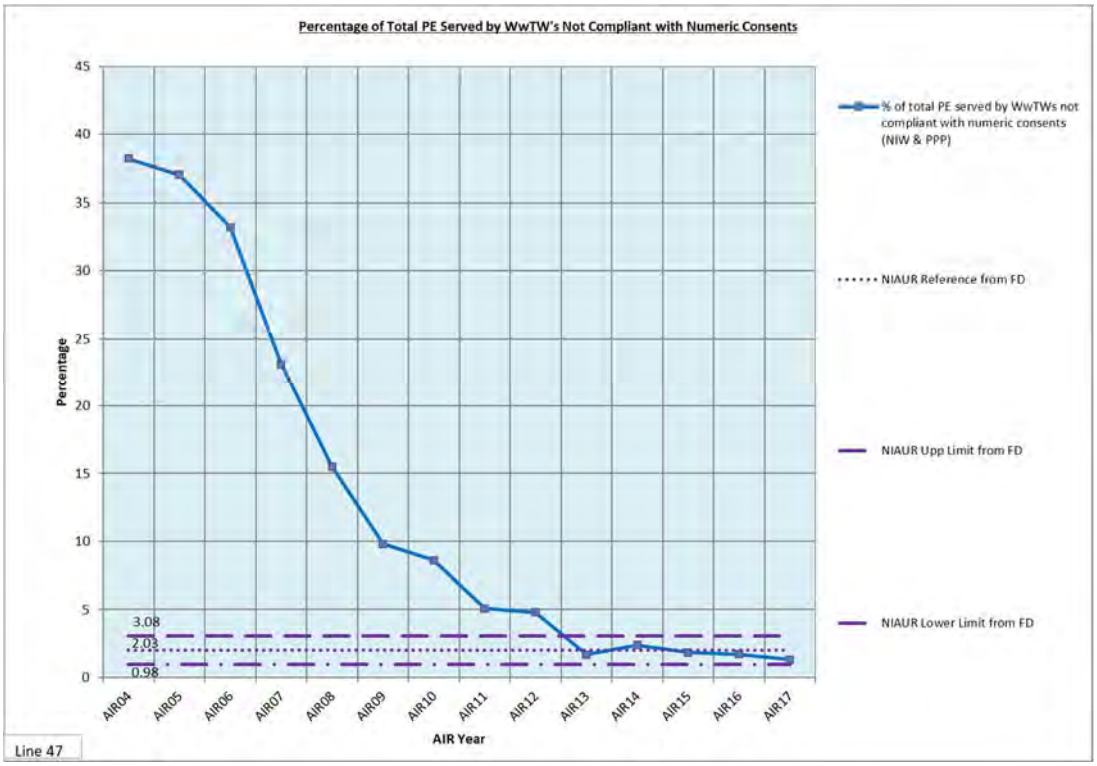
This indicator has continued to show Stable performance over recent years. The regular investment from Capital Maintenance and Quality driven projects has helped maintain this Stable output.



Secondary Indicator

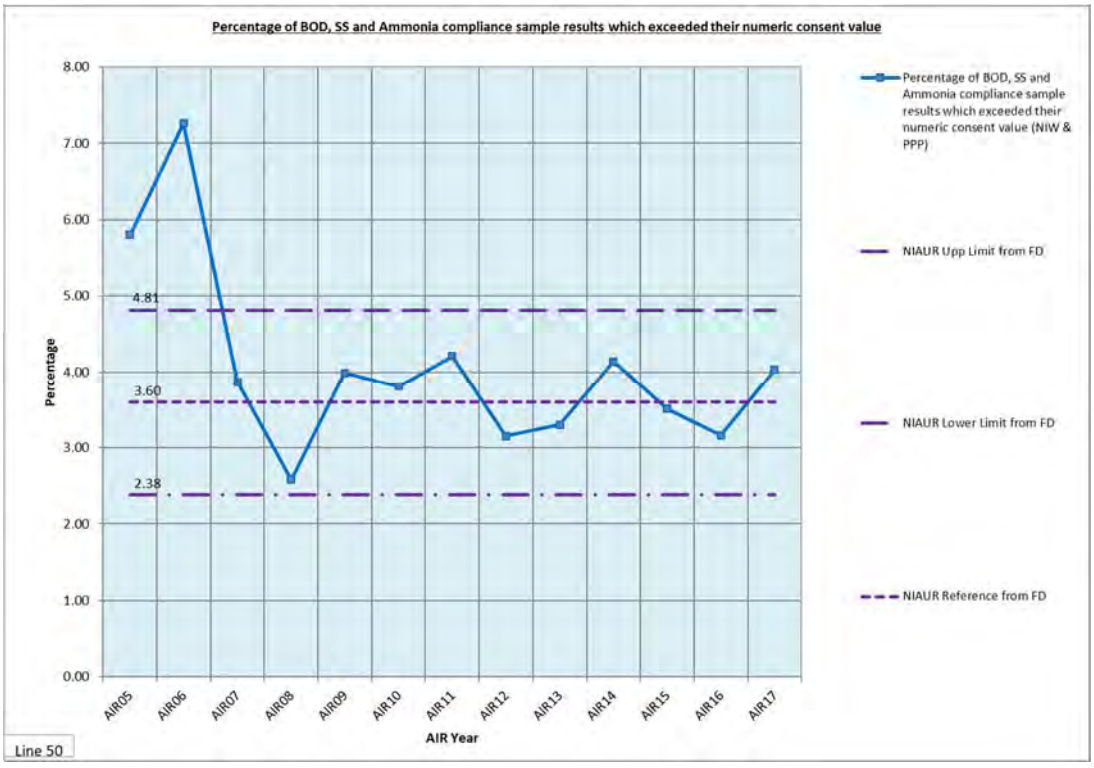
Line 47 – Percentage of Total PE Served by WwTWs Not Compliant with Numeric Consents

This indicator has again shown Stable performance.



Line 50 – Percentage of BOD, SS and Ammonia compliance sample results which exceeded their numeric consent value

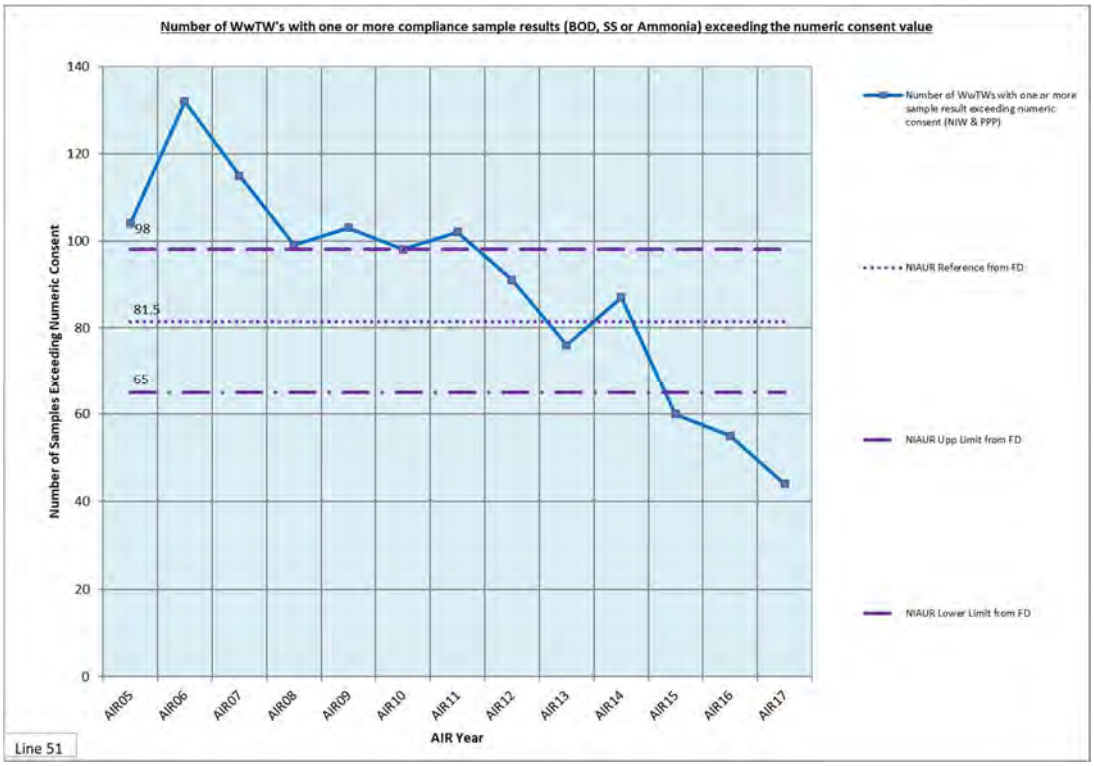
Since the initial outlying figures of AIR05 and AIR06, the "Percentage of BOD, SS and Ammonia compliance sample results which exceeded their numeric consent value" has continued to perform as Stable.



Line 51 - Number of WwTWs with one or more compliance sample results (BOD, SS or Ammonia) exceeding the numeric consent value

This indicator has for the third consecutive year out-performed the Lower Limit. This has become evident by both the annual investment in assets and the extensive operational effort.

This has been assessed as Improving.



Line 53 – Unplanned Reactive Maintenance (Wastewater Non Infra) – Percentage of Availability of Critical Assets

The figures are based on telemetry data for the availability of critical items of plant. Data for this indicator has been previously relayed to the Reporter, who has accepted the methodology and rationale for Availability of Critical Assets. As this is relatively new reported data, Reference and Limits have not been set as a larger range of data is required before Serviceability can be reasonably assessed.

The reduction of items in a failed state over recent years may be due to the benign weather, routine proactive maintenance and/or the prioritisation of capital investment to sites/assets where most required.

Reporting restrictions

The ongoing development of the process for reporting of Sewage Non-infrastructure Unplanned (reactive) maintenance is expected to relate to the percentage availability of critical assets within this operational service area. The principle of operation has already been proven through the development of M&E Out-of-Service databases for some equipment.

The return has been allocated a confidence grading of B2. This is due to the factors listed:

- Telemetry signal anomalies and errors can adversely affect the data for individual items of equipment.

- Equipment that is registered as “tripped in auto”, “in hand” or “tripped in hand” is generally deemed unavailable. Generally, all equipment is operated automatically, so if equipment is switched to ‘in hand’ or is ‘tripped in hand’ it is not available for auto operation as designed. Those assets that are only operated in a manual capacity i.e. always “in hand” can offer misrepresentative data unless filtered out.
- The report is only run on working days i.e. Mon – Fri figures in the report are based on a maximum of 20 days for a 4 week period.
- Reporting on a daily basis means that faults that are repaired prior to the end of the working day are not recorded.

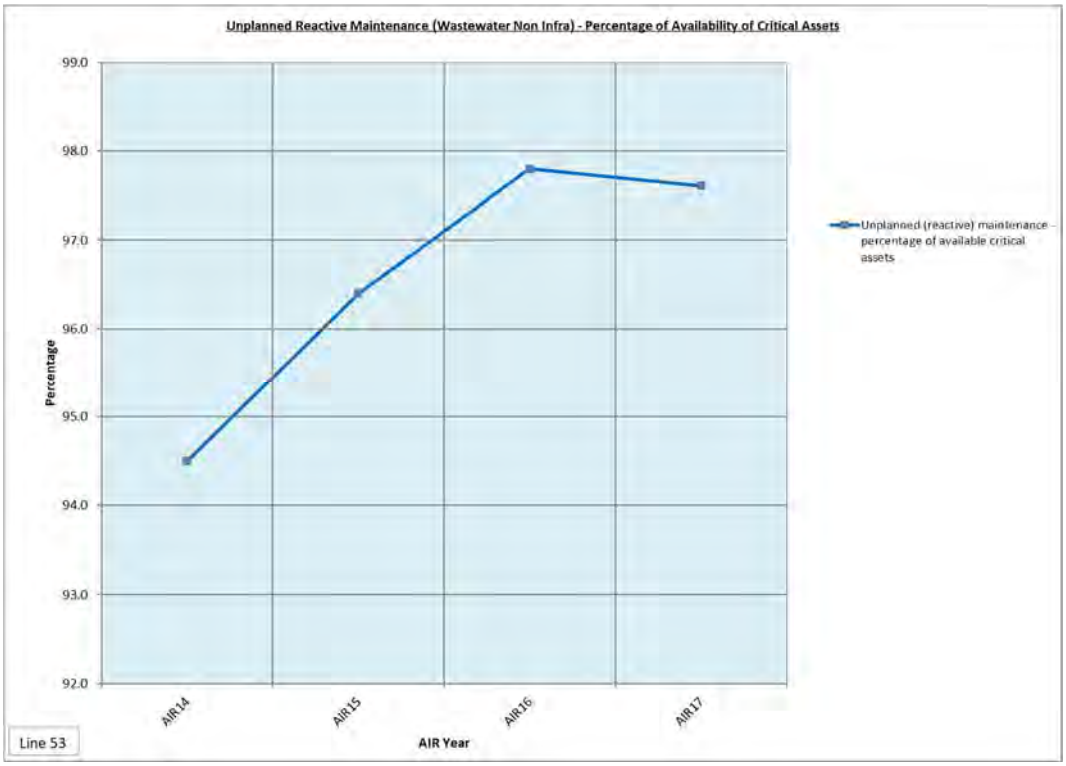


Table 47 – Development Outputs

DEVELOPMENT OUPUT			
1. Development of new consumer measures			
Final Determination: *The company shall report progress on the development of new consumer measures and satisfaction survey outlined in Section 3.7 of the PC15 final determination.*			
GOVERNANCE			
Directorate	**SRO**	**Project Lead**	**Approving Authority**
CSDD	Des Nevin	Rod Neill	EC
Additional Details:			
N/A			
PROJECT SUMMARY			
• New consumer measures have been developed in conjunction with stakeholders as part of the joint CEOG/CSat working group. • 4 new metrics were initially agreed by CEOG – 3 Quantitative and 1 Qualitative: ▪ total contacts ▪ first point of contact resolution (FPOCR) ▪ repeat contacts ▪ Net promoter score (NPS) style measure • This was then amended by the CSat group to 3 measures – 2 Quantitative and 1 Qualitative: ▪ total contacts (which may move to unwanted contacts) ▪ first point of contact resolution (FPOCR) ▪ customer advocacy measure (CAM) • The trial for the new metrics was completed and reported in AIR16. • They continue to be measured and reviewed by NIW, the UR and CSat group members. • Although there is currently 2yrs worth of data, it is insufficient to set targets (based on trendline analysis) at the PC15 mid-term review for performance reporting during the second half of PC15. • The PC15 mid-term review may also result in further adjustments. • It is anticipated that performance targets for the new measures will now be proposed for inclusion in the PC21 business plan and draft/final determinations.			
KEY MILESTONES		Target	Status
1. Development of new consumer measures and approval by CEOG			Complete
2. Complete a trial of new consumer measures		30 Sep 15	Complete
3. Complete a trial of a new consumer satisfaction survey		31 Dec 15	Complete
4. Go live with a new consumer satisfaction survey		01 Apr 16	Complete
5. Report new measures in AIR16		15 Jul 16	Complete
6. Provide update for PC15 Mid-Term Review (via AIR17)		15 Jul 17	On target
7. Propose targets in PC21 Business Plan		Q3 2019/20	On target

Development of new consumer measures

The company shall report progress on the development of new consumer measures and satisfaction survey outlined in Section 3.7 of the PC15 final determination. The company shall:

- *Complete a trial of new consumer measures by 30 September 2015;*
- *Go-live with new consumer measures on 1 April 2016;*
- *Complete a trial of a new consumer satisfaction survey by 31 December 2015; and*
- *Go live with a new consumer satisfaction survey 1 April 2016.*

Activity Completed to date and its outcome

Listening to our customers' views and building these into our plans is essential for us to ensure that our customers' needs are at the heart of our service delivery.

Customer Services has been working extensively on providing an improved customer experience. Under the auspices of the Customer Engagement Oversight Group (CEOG), Customer Services has been actively engaging with NIAUR, CCNI and DRD to develop a range of new quantitative and qualitative customer measures which are most relevant to us and our customers, including the merits (or otherwise) of the current (OPA/DG) regulatory measures.

These new measures include the development of targets and methodologies for:

- Customer Contacts,
- Resolving customer queries at first point of contact (FPOCR),
- Reducing repeat contacts, by analysing and understanding the reasons for these contacts, and
- Developing a solution to obtain more meaningful and timely customer satisfaction feedback to highlight, as close to real time as possible, those areas and activities, which cause dissatisfaction for customers.

Planned next steps for delivery

The measures above were trialled and reported on for the first time in AIR16.

Following discussions with the other Stakeholders in CEOG – NIAUR, CCNI and DfI – it was agreed that the measures could be amended from 4 to 3;

- total contacts (which may move to unwanted contacts)
- first point of contact resolution (FPOCR)
- customer advocacy measure (CAM)

Although we have been measuring the original quantitative and qualitative customer measures for two years, CEOG thought there was insufficient data available to set appropriate targets for performance management at the PC15 mid-term review for the second period of PC15. Ideally, three to four years of data would provide sufficient data to set realistic targets. Having demonstrated our customer commitment, CEOG agreed that NI Water could further develop the customer measures and recognised that these adjustments may also need to be considered at the mid-term review.

As such, it was agreed that these new (or revised) measures would continue to be monitored during the remainder of PC15 in the anticipation that performance targets for the new measures will now be proposed for inclusion in the PC21 business plan and draft/final determinations.

DEVELOPMENT OUPUT		
2. Plan for Asset Maintenance		
Final Determination: *The company shall provide a clear plan of how it will develop its approach to asset maintenance by 30 June 2015 with an interim update by 30 April 2015.* *The plan shall meet the basic requirements set out in Section 4 of the final determination. The company shall report progress against the plan throughout PC15. We shall determine the frequency of reporting once the plan has been developed.*		
PROJECT SUMMARY		
A detailed PID and programme plan have been developed and progress is monitored by the Project Board.		
KEY MILESTONES	Target	Status
1. Interim update to UR	30 Apr 15	Complete
2. Approach document to UR	30 Jun 15	Complete
3. Complete visits with sample E/W/S water Co.s	31 Jan 2017	Complete
4. Update EC and gain approval on way forward	8 Mar 17	Complete
5. Verbal update to UR on progress to date and way forward	16 Mar 17	Complete
6. Business Case for Development of CMP Tools AO CIP Approval	May 17	On target
7. Provide update for PC15 Mid Term Review (via AIR17)	15 Jul 17	On target
8. Award Contract for Development of CMP Tools	Sep 17	On Target
9. PC21 Business Plan – Capital Maintenance Plan	Sep-Dec 2019	On target

Summary of Progress since AIR16

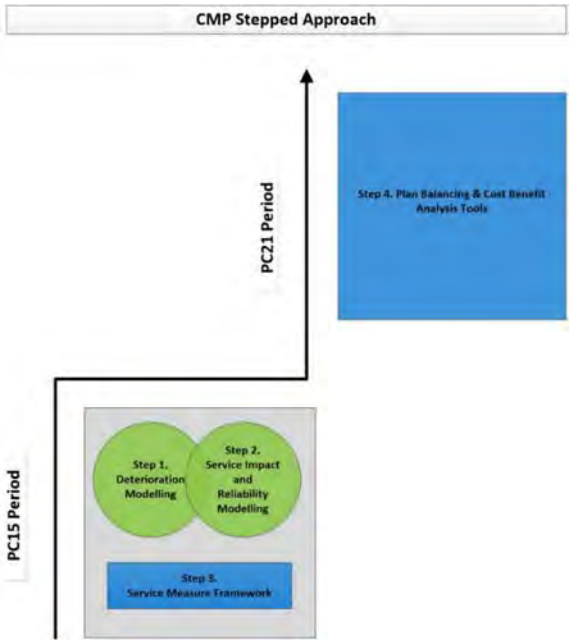
In previous correspondence, NI Water set out its approach to asset maintenance in accordance with the Final Determination Main Report 2014. There have been a number of formal updates since this time including the Development Output update for AIR16 and at a meeting with the Utility Regulator on the 16th March 2017.

Since the AIR16 submission as part of a review of Capital Maintenance Processes, a delegation from NI Water visited three Water & Sewerage Companies (WASCs) and these included:

- Northumbrian Water
- Welsh Water
- Anglian Water

In addition, Scottish Water visited NI Water for further discussion on Capital Maintenance Processes and telephone conversations took place with South West Water and United Utilities. This enabled a broad understanding of the Tools/Processes used by other WASCs and the reasoning for these.

Subsequently NI Water has developed a stepped approach for the development of Strategic Planning Tools. These tools are required to give a forward-looking view of the need for capital maintenance in order to maintain service at the least cost over time. The diagram below highlights the stepped approach.

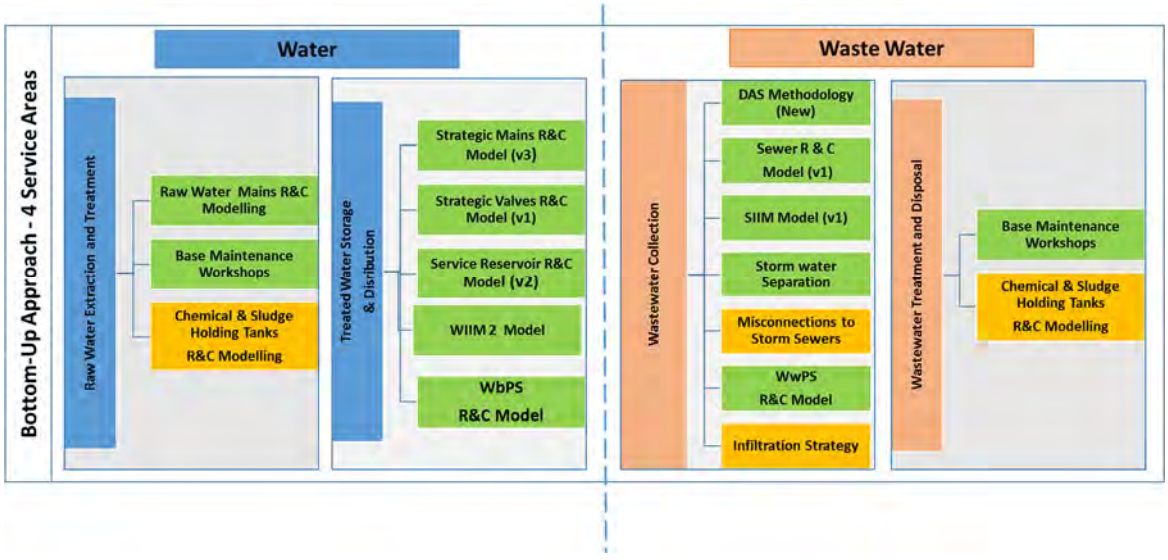


This approach has been formally approved by NI Waters Executive Committee and involves implementing Step 1 – Deterioration Modelling, Step 2 - Service Impact and Reliability Modelling and Step 3 - Service Measure Framework to inform the PC21 submission. The degree of sophistication would be at a relatively low level of granularity initially but with processes in place to improve this over time.

The development of the above steps allows scenario analysis to take place within the individual service areas, which can link future serviceability to future expenditure and KPIs.

The development of the Service Measure Framework has already began and is due to complete in June 2017 and this will allow the implementation of Plan Balancing/Cost Benefit Analysis tools in the future when there is further maturity to CMP data and processes.

There has also been further development of NI Waters Tactical Investment Planning Tools and the table below highlights the Tactical Investment Tools that are currently in use or under development to assist Capital Maintenance Planning.



These tools have all been developed or enhanced since the PC15 submission and will be further refined during the current planning period.
As indicated in AIR16, since the formal submission of the CMP High Level Roadmap to NIAUR, the Roadmap information has been translated into a tracking spreadsheet, which is being used for detailed project reporting to a Capital Maintenance Planning Group, which has been meeting on a regular basis. The purpose of the group is to ensure that delivery against the eleven key initiatives is on target. The table below highlights the status to date against each of the key initiatives.

Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
1. Strategy and Policy Objectives		
1.1 Confirm and implement the CMP High Level Roadmap including confirmation of roles, responsibilities, budgets and governance procedures	Q4 2015-16	Roadmap approved
1.2 Develop an initial framework of key service targets, measures and planning objectives to define the development of the capital maintenance model	Q4 2015-16	Initial framework completed
1.3 Develop a Capital Maintenance Planning Strategy to guide the outputs from the systems and processes that are put in place	Q4 2016-17	Not yet commenced - This output will be shaped by whichever Strategic tools/models are procured which should be in place Sept 17
1.4 Determine how the developed CMP capability will be deployed to develop the PC21 business plan	Q2 2018-19	Not yet commenced
2. Improve Asset Knowledge		
2.1 Wastewater Infrastructure:	Q4 2017-18	
Critical Sewers – Develop a tool to prioritise CCTV surveys, which will then be used to implement a 12-month survey programme.		Using model to predict sewers requiring rehabilitation and then carrying out CCTV surveys to confirm.
CSOs and Ancillaries – Interrogate GIS system to review data (including sensitivities of locations) associated with CSOs.		CSO Monitoring to take place at all CSOs within 2km at Shellfish & Bathing Waters (Approx. 450/400) Batch 1 - Q4 2016/17 Batch 2 - PC15 Potentially line to be added within GIS to define sensitivities of locations Parameters of what is a 'critical/sensitive' CSO to be established

Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
2.2 Wastewater Non-Infra:	Q1 2019-20	
WWTWs > 250PE (inc Sludge Treatment Centres - STCs) & WWPS - Formalise and enhance the recording of all asset specific information (on CAR) resulting from Maintenance Schedule Tasks, reactive and proactive work orders and capital maintenance interventions. The latter will be complimented by reliability and redundancy information that will be captured through liaison with Operational staff.		A high level Risk Methodology for 2017/18 Capital Maintenance Workshops was developed. This captured Criticality and Time to Repair/Replace from Expert panels.
Small WwTWs < 250PE – Formalise and enhance the recording of all asset specific information (on CAR) resulting from Maintenance Schedule Tasks, reactive and proactive work orders and capital maintenance interventions. Reliability and redundancy information will be captured on WWTWs on the basis of cohorts of works treatment types, PE banding etc.		A high level Risk Methodology for 2017/18 Capital Maintenance Workshops was developed. This captured Criticality and Time to Repair/Replace from Expert panels.
Develop Asset Performance Business Analytics to assist in the collation of all relevant asset knowledge held on corporate systems		APT presently working with ICT to develop Asset Performance Business Analytics
2.3 Water Infrastructure:	Q4 2016-17	
Strategic Mains – Instigate a process for data capture (including condition data from routine maintenance)and root-cause analysis associated with future failures and/or adverse service impacts		A project has been initiated to assess cut-outs for condition grading of mains >300mm
Undertake geographical analysis linking bursts to specific assets.		BAU links bursts to assets
Obtain additional datasets (e.g. updated roads, rivers and flood plain datasets) and review and update the existing Trunk Main (Strategic Supply) Model.		This is carried out as BAU through the Trunk Main Risk & Consequence Model and latest data is used were applicable.

Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
Identify and commission further condition assessment surveys on high-risk systems (including possible non-intrusive monitoring).		Although condition assessments are being carried out as BAU a paper is being developed on a pilot scheme of a matrix of condition assessments techniques
Distribution Mains – Improve the bottom up modelling approach within WIIM		This is now BAU through the development of WIIM2. WIIM2 incorporates DG3 analysis, for example, and is regularly being updated and improved
Create distribution mains asset cohorts, within CAR, based on material, diameter, length and age ranges and link bursts to pipe asset cohorts.		This work is 90% complete with further refinement required to establish gaps between Strategic & Distribution mains. There has been recent discussions across the business to develop a list of rules to distinguish between a Strategic Trunk Main, Strategic Distribution Main and a Distribution Main and these will be embedded as BAU to allow completion of this initiative
Instigate a process for data capture and root-cause analysis associated with future failures and/or adverse service impacts.		Root Cause Analysis of Distribution Mains is felt not to be a relevant action. This is only relevant for Strategic Mains. Best practise on data capture is carried out as BAU for WIIM2
Assess data availability (as regards serviceability indicators) and implement BAU processes to capture and incorporate additional datasets (e.g. updated roads, rivers and flood plain datasets).		The data required has been assessed and BAU processes are in place for WIIM2.

Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
Service Reservoirs (SRs) & Clear Water Tanks (CWTs) – Continue to integrate SR inspections with cleaning and maintenance programmes, where possible, and capture knowledge of improvement in asset performance from asset renewals / maintenance and the cleaning programme.		This is ongoing as BAU and the process has been reviewed and updated twice since the PC15 submission
2.4 Water Non-infra	Q3 2017-18	
WTW and WPS – Enhance the recording of all asset specific information (on CAR) resulting from Maintenance Schedule Tasks, reactive and proactive work orders and capital maintenance interventions. The latter will be complemented by reliability and redundancy information that will be captured through liaison with Operational staff.		Commenced a 'Data Specification' document to identify most beneficial data to be collating.
Develop Asset Performance Business Analytics to assist in the collation of all relevant asset knowledge held on corporate systems.		APT presently working with ICT to develop Asset Performance Business Analytics
3. Define Failure Modes and Identify Deterioration		
3.1 Wastewater Infrastructure	Q4 2017-18	
Critical Sewers – Develop the Sewerage Infrastructure Investment Model (SIIM) to link condition grade and collapse probability using published data / past failure data, to indicate sewer deterioration.		CCTV surveys are carried out to assess the condition grade of the sewers. This information to be made available on the corporate systems The next stage will be shaped by whichever Strategic tools /models are procured which should be in place Sept 17

Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
Other Sewers – Develop SIIM to ascertain the probability of blockage and collapse based on relevant characteristics of sewer cohorts normalised for any specific weather effects or extreme weather events		A Hot Spotting Tool has been developed which records the blockage and collapse information The next stage will be shaped by whichever Strategic tools /models are procured which should be in place Sept 17
Rising Mains - Develop SIIM to ascertain burst probability based on characteristics of rising main cohorts**.**		A risk based assessment tool for rising mains is currently being developed
The need for a specific Deterioration Model for sewers will also be assessed		Following the assessment of other Water & Sewerage Companies and internal review, NI Water do intend to procure a sewer deterioration model
3.2 Wastewater Non-Infra	Q4 2018-19	
Review and develop the approach to standard asset lives for all WWTWs (and STCs) and WWPS informed by relevant criticality and reliability factors		There have been ongoing discussions with ICT to understand information available from Asset Performance Business Analytics. The next stage will be shaped by whichever Strategic tools /models are procured which should be in place Sept 17
Allocate deterioration curves to asset lives and benchmark against other companies where possible		This initiative will be shaped by whichever Strategic tools/models are procured, and these should be in place Sept 17
Capture specific failure data against asset types; review recording processes to determine the reliability/relevance of the recording of failure types (including M&E) and activity types included within the MWM job management system		There has been some initial analysis on the quality of failure data with a view to identifying gaps

Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
3.3 Water Infrastructure	Q4 2016-17	
Strategic/Distribution Mains – Undertake statistical analysis of burst and deterioration data for the broader asset base and assess the viability of a deterioration model		Strategic Mains are considered as Low Failure High Consequence Assets and as such, the data is not available for a robust deterioration model. This will be assessed through the Trunk Main Risk & Consequence Model
3.4 Water Non-Infra	Q3 2017-18	
Review and develop the approach to standard asset lives		There have been ongoing discussions with ICT to understand information available from Asset Performance Business Analytics. The next stage will be shaped by whichever Strategic tools /models are procured which should be in place Sept 17
Allocate deterioration curves to asset lives and benchmark against other companies where possible		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
Capture specific failure data against asset types; review recording processes to determine the reliability/relevance of the recording of failure types (including M&E) and activity types included within the MWM job management system		There has been some initial analysis on the quality of failure data with a view to identifying gaps
4. Impacts of Asset Failure		
4.1 Wastewater Infrastructure	Q2 2018-19	
Critical Sewers – Review the number and cost to NI Water and stakeholders of blockages and collapses on critical sewers.		As part of AIR Reporting, the costs of blockages and collapses are captured. However further analysis required on this with regards to CMP.
Other Sewers – Enhance the consequence information within the existing SIIM to include the extent of impact		There current SIIM model is currently being reviewed for an enhancement to the process which will include the extent of impact

Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
Rising Mains – Develop the SIIM to include rising mains basing the approach on that used for gravity sewers		An initial meeting took place in February for the development of a Risk Based assessment tool for rising mains. This will be implemented in 17/18
CSO and Ancillaries – Ascertain and analyse failure data.		Not yet commenced
4.2 Wastewater Non-Infra	Q2 2019-20	
WWTWs > 250PE (inc STCs) – Develop a service impact model; allocate the extent of service impact for each process stage/critical asset at each works including mitigation costs. Utilise the expertise of Operational staff to carry out FMECA type analysis (which may require a specific model) for each WWTWs.		A high level Risk Methodology for 2017/18 Capital Maintenance Workshops was developed. This captured Criticality and Time to Repair/Replace from Expert panels. The next stage will be shaped by whichever Strategic tools /models are procured which should be in place Sept 17
Small WwTW < 250PE - Develop generic assumptions on the extent of impact and mitigation costs, on the basis of cohorts of works treatment types, PE banding etc.		A high level Risk Methodology for 2017/18 Capital Maintenance Workshops was developed. This captured Criticality and Time to Repair/Replace from Expert panels. The next stage will be shaped by whichever Strategic tools /models are procured which should be in place Sept 17
WWPS – Develop the Risk and Consequence Methodology for WWPSs to incorporate the extent of service impact for each site including mitigation costs.		This initiative will be shaped by whichever Strategic tools/models are procured, and these should be in place Sept 17
4.3 Water Infrastructure	Q2 2017-18	
Strategic Mains – Link burst and DG3 datasets to assets and analyse to understand the consequence of bursts		This is carried out as BAU through the Trunk Main Risk & Consequence Model and latest data is used were applicable.

Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
Create high-risk system schematics, to link and inform the DWSP risk assessments		Initial discussions have indicated that there should be little impact on the DWSP and therefore could be closed out.
Validate the existing Trunk Main Risk and Consequence Model through review of scores and weightings and incorporation of ongoing case-based learning		This is carried out as BAU through the Trunk Main Risk & Consequence Model and latest data is used were applicable.
Carry out hydraulic 'critical link analysis' for high-risk systems including modelling of flood impact and review/validate at a high level against actual incident data		This work is not deeded to be required at this stage and will be assessed in the future
Subsequently update the existing Trunk Main Risk and Consequence model with newly available and improved data, consequence understanding and validation		This is carried out as BAU through the Trunk Main Risk & Consequence Model and latest data is used were applicable.
Distribution Mains – Develop the risk and consequence aspect of WIIM and determine population at risk of interruption from failure of each main using critical link analysis and review/validate at a high level against actual incident data. WIIM will subsequently be developed with improved data, consequence understanding and validation.		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
SR & CWT – Develop good practice Service Reservoir risk assessments and formalise Expert and Challenge Panel meetings to validate the subjective weightings annually as part of business as usual		This is carried out as BAU on an annual basis with a review group established
Develop the Risk and Consequence Model from the existing SR/CWTs Condition Investment Prioritisation Methodology using good industry practise (UKWIR) and use outputs (vulnerability assessments) to inform the condition assessment programme		The Risk and Consequence Model for the SR/CWTs has been reviewed to include any relevant outputs from the 2017 UKWIR Project – 'Management of Treated Water Storage Assets.'
Develop DWSP contingency and mitigation plans (capex / opex), by prioritised SR / CWT risk assessment score		As it currently stands DWSP do not link to Capital Investment needs - Further work required to establish how to advance.

Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
Update the Trunk Main (Strategic Supply) Model with the most strategic SR & CWTs and undertake resilience (which may include instrumentation control), criticality, water quality risk and outage assessments and planning. The output will inform DWSPs and allow NI Water to allocate extent of service impact for each structure.		This is carried out as BAU through the Trunk Main Risk & Consequence Model and latest data is used were applicable
4.4 Water Non-Infra	Q3 2017-18	
WTW – Allocate the extent of service impact for each process stage/critical asset at each works including mitigation costs. Utilise the expertise of Operational staff to carry out FMECA type analysis (which may require a specific model) for each works		Some initial work regarding criticality is ongoing with regards to progressing this initiative
WPS – Develop a Risk and Consequence Methodology for WPS, similar to that which NI Water has developed for the WWPS. It will be developed to incorporate the extent of service impact for each site including mitigation costs.		A risk and consequence model for WPS is currently being developed.
5. Intervention Options and Impacts		
5.1 Wastewater Infrastructure	Q3 2017-18	
Critical Sewers – Review published repair cost factors against cost of historical repairs		Not yet commenced
Other Sewers – Develop a cost model for proactive sewer cleansing programmes and a whole life valuation model to plan a programme of proactive sewer cleansing		This is currently being developed through an enhanced CCTV programme
5.2 Wastewater Non-Infra	Commence Q4 2015-16	

Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
For all **WWTWs (and STCs) and WWPS** capture and analyse information from Operators and corporate systems regarding the impact of maintenance interventions (including refurbishments, change to operating regime or MSTs, or mid-life interventions) on asset performance, efficiency and effect on asset lives		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
Evaluate the cost risk of planned versus 'emergency' refurbishment/ replacement activities.		Not yet commenced
5.3 Water Infrastructure	Q2 2017-18	
Strategic Mains – Develop an intervention strategy for prioritised pilot schemes with cost benefit analysis using best available data		A Strategic Mains Review Group has been established to assess schemes on a quarterly basis
Identify contingency plans and potential capex & opex solutions for high-risk systems based on priorities following model updating, linking to the Water Resource Supply Resilience Plan and the DWSPs		The current WRSRP looks at Resilience and outages of WTWs. Outage data is of poor quality and discussions have taken place with water Supply Business Unit to ensure that outage information is improved upon going forward
Distribution Mains – Develop an Intervention Strategy with a focus on cost benefit and whole life value analysis, using outturn costs, rather than framework rates		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
Prioritise critical sluice valves for intervention (based on risk and consequence approach) and identify capital need		A study has been completed on the risk of critical SVs. A pilot has begun to assess this and action as required on operability.
SR & CWT – Develop cost benefit analysis of intervention types, based on UCD outturn costs		This action is not required as NIW repair faults on joints/membranes & covers as discovered. This would deemed to be essential work if issues are identified
Collate outputs from the condition assessment programme / interventions to better understand the effectiveness of interventions		This is the next stage of the SR Condition Assessment programme to be progressed

Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
Develop a costed asset condition assessment programme and assess economic level of service risk		This is the next stage of the SR Condition Assessment programme to be progressed
5.4 Water Non-Infra	Commence Q4 2015-16	
For all **WTW and WPS -** Capture and analyse information from Operators and corporate systems regarding the impact of maintenance interventions (including refurbishments, change to operating regime or MSTs, or mid-life interventions) on asset performance, efficiency and effect on asset lives		This initiative will be shaped by whichever Strategic tools/models are procured, and these should be in place Sept 17
Evaluate the cost risk of planned versus 'emergency' refurbishment/replacement activities.		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
6. Valuation of Service Levels		
6.1 Evaluate the appropriateness of the approach and the need to quantify service level values prior to further development	Q2 2016-17	This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
6.2 Develop appropriate service measures and cost components (including Opex, reputation) to drive capital maintenance investment planning	Q3 2016-17	This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
6.3 Review historical service level valuation data and evaluate model options	Q4 2016-17	This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
6.4 Develop a service valuation model and populate it with available data – updating this subsequently to reflect the impact of updated S&EG (for PC21)	Q1 2017-18	This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
6.5 Undertake customer engagement to understand priorities for customers and stakeholders and use this to inform / update the service valuation model	Q3 2018-19	This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17

Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
7. Intervention Cost Model(s)		
7.1 Develop a UCD structure and process for capex (FOM _ Investment Planning project)	Q4 2015-16	The work on this aspect is well developed for EP Capital (Captrax) but less so for Ops capital (Coptrax) The Ops Capital Aspect will be developed further in the coming months
7.2 Review and assess the use of current opex/capex systems such as MWM and Cost to Serve	Q1 2016-17	The work on the UCD is well developed for EP Capital (Captrax) but less so for Ops capital (Coptrax) The Ops Capital Aspect will be developed further in the coming months
7.3 Create an Improvement Plan for opex/capex systems (including improved opex/capex data collection)	Q3 2016-17	The Asset Data Quality Sustainability Group has been established but additional work is required on this element to progress
7.4 Assess costs from wider business to inform service valuation model (customer complaint costs/call centre/ legal etc.)	Q4 2016-17	This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
7.5 Populate the UCD with capital maintenance cost data	Q4 2017-18	The work on this element is ongoing
7.6 Develop cost curves and tabulations within the UCD	Commence Q1 2016-17	The work on this element is ongoing
7.7 Implement improved opex/capex data collection	Q2 2018-19	The issues with CAPEX data collection have been resolved but further work is required on OPEX data. This may sit outside the remit of the project
7.8 Develop a model for analysing opex / capex data	Q2 2017-18	This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17

Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
8. Best Value Planning Tools		
8.1 Wastewater Infrastructure	Q4 2017-18	
Critical / Other Sewers – Develop the SIIM to incorporate a whole life valuation model to prioritise sewer rehabilitation.		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
Rising Mains – Develop the SIIM to predict likely failures and will incorporate a whole life valuation model to identify priority rising mains for rehabilitation.		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
CSO and Ancillaries – Develop a spreadsheet based prioritisation tool		Not yet commenced
8.2 Wastewater Non-Infra	Q2 2017-18	
WWTWs > 250PE (inc STCs) – Assess, select and implement a best value planning model		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
WWTWs < 250 PE - Develop a simplified planning spreadsheet.		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
WWPS – Select and implement a strategic best value planning tool to model deterioration and mitigation impacts, populated with intervention and service costs		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
8.3 Water Infrastructure	Q4 2017-18	
Strategic Mains – Review and develop the Trunk Main investment strategy model for high-risk schemes and systems to model deterioration and mitigation impacts as performance measures, populated with intervention and service costs		Strategic Mains are considered as Low Failure High Consequence Assets and as such, the data is not available for a robust deterioration model. This will be assessed through the Trunk Main Risk & Consequence Model
Distribution Mains – Develop the WIIM to model mitigation impacts as performance measures, linking performance and deterioration to impacts, to enable full cost benefit analysis of schemes		Not yet commenced

Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
SR & CWT – Develop SR/CWT investment strategy model for high-risk SR/CWT's, populated with intervention and service costs		Not yet commenced
8.4 Water Non-Infra	Q3 2017-18	
WTW – Assess, select and implement a best value planning model		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
WPS – Select and implement a strategic best value planning tool to model deterioration and mitigation impacts, populated with intervention and service costs		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
9. Integrated CMP Tool		
9.1 Define strategic objectives for the Capital Maintenance Planning tool that incorporate regulatory, shareholder and stakeholder views in relation to priorities, risk and balancing investment	Q2 2016-17	This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
9.2 Develop a formal methodology to balance capital maintenance needs, projects and budgets	Q3 2016-17	This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
9.3 Review and assess existing (SCIM) and potential capital investment prioritisation tools	Q2 2016-17	Following the assessment of other Water & Sewerage Companies and internal review, NI Water do not intend at this stage to implement a capital investment prioritisation tool
9.4 Develop and implement the appropriate capital investment prioritisation methodology or tool by March 2017	Q4 2016-17	Following the assessment of other Water & Sewerage Companies and internal review, NI Water do not intend at this stage to implement a capital investment prioritisation tool

Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
9.5 Implement trial run of the prioritisation tool with available data	Q4 2017-18	Following the assessment of other Water & Sewerage Companies and internal review, NI Water do not intend at this stage to implement a capital investment prioritisation tool
10. 'Top Down' Methodology		
10.1 Implement an annual review of serviceability performance and capital maintenance delivered by service to inform the Top Down methodology	Commence Q1 2016-17	This is ongoing as BAU but may require an enhancement to process in the future
10.2 Build on the PC15 top down approach (using serviceability and capital maintenance costs) to include consideration of excess opex costs incurred in maintaining service	Q3 2017-18	Not yet commenced
10.3 Review the relevance of an MEAV analysis for PC21, to provide an alternative top down assessment of future replacement costs of non-infrastructure assets	Q4 2017-18	It has been agreed that MEAV should not be advanced at this stage
10.4 Review alternative top-down benchmarks in context of the S&EG and other (ministerial) constraints to validate bottom up capital maintenance outputs	Q1 2018-19	This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
11. Develop Capital Maintenance Planning Resources	Ongoing	
Undertake strategic assessment of the asset management capabilities needed to deliver Key Initiatives		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
Review current asset management capabilities versus expected requirement for skills and resources		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
Deliver the required in house capabilities through appropriate skills development		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17

Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
Identify requirements for outsourcing/ insourcing additional resources and capabilities		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
Additional Initiatives Following AIR16 Reporter Review		
2.2.4 **Sea Outfalls** Improve Asset Knowledge Wastewater Infrastructure		Initial discussions have taken place to develop an approach for CMP for this Asset Type, in terms of a desktop study and surveys required.
2.3.5 **Raw Water Trunk Mains** **I**mprove Asset Knowledge Water Infrastructure: Strategic Mains		This is being carried out as BAU as a Raw Water Risk & Consequence Model has been developed and regularly updated
2.4.2 **Raw Water Intakes and Pumping Stations** Improve Asset Knowledge Water Non-infra		The relevant approach for Raw Water Intakes and Pumping Stations is currently being assessed
4.2.4 **Sea Outfalls** **Impacts of Asset Failure** **Wastewater Non-Infra**		Initial discussions have taken place to develop an approach for CMP for this Asset Type, in terms of a desktop study and surveys required.
4.3.6 **Raw Water Trunk Mains** Impacts of Asset Failure Water Infrastructure - Strategic Mains		This is being carried out as BAU as a Raw Water Risk & Consequence Model has been developed and regularly updated
4.4.2 **Raw Water Intakes & Pumping Stations** Impacts of Asset Failure Water Non-Infra		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
5.3.3 **Raw Water Trunk Mains** Intervention Options and Impacts Water Infrastructure - SR and CWT		This is being carried out as BAU as a Raw Water Risk & Consequence Model has been developed and regularly updated
8.2.4 Sea **Outfalls** - Develop a simplified planning spreadsheet. Best Value Planning Tools Wastewater Non-Infra		This initiative will be shaped This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17

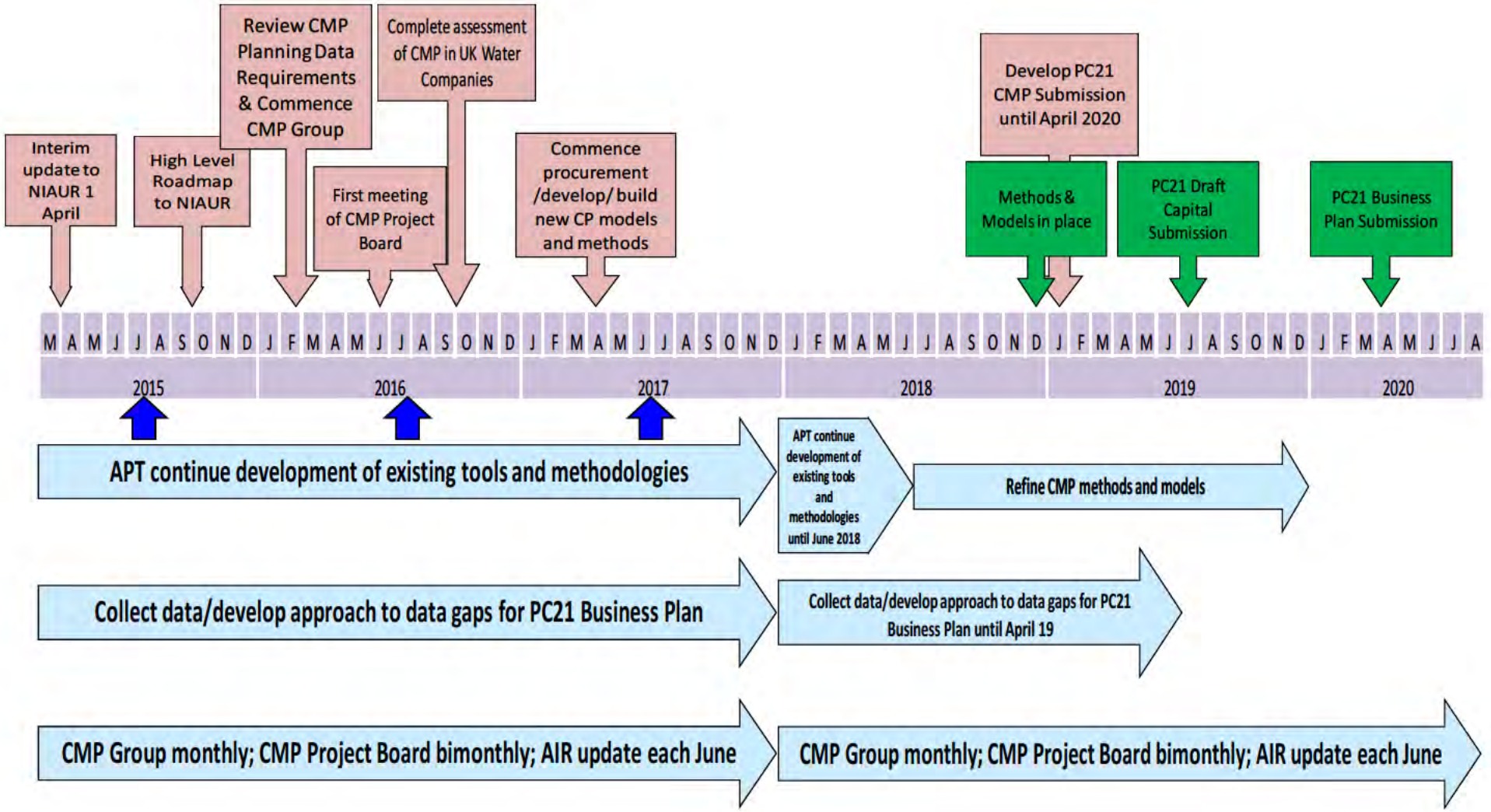
Key Initiative	Delivery Milestone	Progress Sept 2015 to April 2017
8.3.2 **Raw Water Trunk Mains** Best Value Planning Tools Water Infrastructure		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17
8.4.2 **Raw Water Intakes and Pumping Stations** Best Value Planning Tools Water Non-Infra		This initiative will be shaped by whichever Strategic tools /models are procured, and these should be in place Sept 17

The Next Steps

The next steps in the development of NI Water's 'Plan for Asset Maintenance' include:

1. Further development of the CMP methodologies and tools which currently exist within NI Water;
2. Procurement of a Service Provider to implement Deterioration and Risk & Reliability Modelling for the PC21 CMP Submission
3. Continuation of Project Board Meetings to review progress, understand risks and endorse the key strategic decisions.

Capital Maintenance Planning - Key Inputs & Milestones



DEVELOPMENT OUPUT		
3. Preservation of Services and Civil Emergency Measures Direction (PSCEMD)		
Final Determination: *The company will report progress on delivery of PSCEMD enhancements agreed with the Department for Regional Development.* *The Utility Regulator will seek updates from DRD to confirm that the agreed work has been completed.*		
Additional Details:		
The NI Water Security & Resilience Manager works closely with DfI and CPNI to ensure compliance with PSCEMD.		
PROJECT SUMMARY		
PSCEMD is a Regulatory Instrument directing NI Water to undertake such works as are necessary to preserve services and mitigate the effects of a Civil Emergency. On an annual basis, NI Water appoints an approved external Certifier to prepare a Statement of Compliance and provide a supplementary report for DfI, detailing progress on delivery of key measures previously notified. In-year progress reporting, on an exception basis, is directly to DfI via regular QSM Reports.		
KEY MILESTONES	Target	Status
1. External Certifier has pre-audit meeting with WDPD staff	Dec 17	On Target
2. External Certifier completes PSCEMD Audit	Feb 18	On Target
3. Submission of Compliance Statement & PSCEMD Report to DfI	1st April 18	On Target
4. In-Year reporting to DfI by exception	As Required	On Target

Executive summary

With respect to activity completed to date and its outcome, details were provided to DRD Water Policy Shareholder Division as part of the Quarterly Shareholder Meeting Report for Quarter 2 (16/17) for the period to 30 September 2016. A subsequent joint review to refine reporting arrangements concluded that going forward, reports for PSCEMD Critical Sites will, as requested by Water Drainage Policy Division, be by exception only.

Regarding Planned Next Steps for Delivery, this was the subject of extensive bilateral discussion with WPSD staff commencing in July 2014 and continuing through various iterations and changes requested by the Department, until a programme was agreed, as confirmed in writing by the Director of Water Policy and Shareholder Division dated 12th April 2016.

The independent PSCEMD Audit Report and CNI Sites Audit Reports submitted to The Department for Infrastructure, Water Drainage Policy Division on 31st March 2017 included assessment of work done to date and endorsement of future work programme.

Detailed update

On 31st March 2016, NI Water wrote to the Department enclosing a programme of security hardening work to be completed during the remainder of the PC15 period, comprising:

- 13 Non-CNI Water Treatment Works (5 Enhanced & 8 Basic Plus)
- 54 Service Reservoirs all Enhanced
- 2 Wastewater Treatment Works (2 Basic Plus)

It was agreed that the programme would be subject to ongoing review throughout the PC15 period to capture and reflect changes in the distribution network and in some instances reappraisal of needs.

For example, the number of Service Reservoirs to be security hardened has changed due to decommissioning and overlap with other capital projects on the Base Maintenance Programme, the nett effect being a reduction from 54 to 53 sites requiring security hardening under this programme.

The most recent programme review indicated that:

- 13 Non-CNI Water Treatment Works will complete by November 2018
- 53 Enhanced Service Reservoirs will complete by January 2018
- 2 Wastewater Treatment Works, programme still to be confirmed but will complete during PC15 period

Changes to the original estimated delivery timetable reflect actual time spend on issues such as planning approval, programme scheduling and revising design elements in light of experience gained from previous security hardening projects.

DEVELOPMENT OUPUT		
4. ICAT Strategy		
Final Determination: *The company shall report progress on the development and implementation of the ICAT strategy including implementation of the trial projects proposed for PC15 and its benefits and the economic case for extending the strategy.*		
PROJECT SUMMARY		
The Instrumentation, Control, Automation and Telemetry (ICAT) Strategy is focussed on enabling NIW to become more customer focussed, to improve compliance and become more resilient, whilst simultaneously reducing costs. This project addresses this through development of reliable automation and controls, to minimise manual input and on site presence, for process and plant controls and to facilitate remote monitoring and control of plant and processes that is not currently available for our assets, (focusing on Service Reservoirs). The project is divided into 6 phases based around WTW supply zones. The full programme overview for the 6 phases for PC15 was provided in AIR 16. A shorter milestone programme is outlined below.		
KEY MILESTONES	Target	Status
1. PC15 ICAT Business Case Approval	30/11/15	Complete
2. First PC15 ICAT Delivery Programme Board Meeting	06/05/16	Complete
3. PID Approval (Phase 1 Omagh / Cookstown)	06/05/16	Complete
4. ICAT delivery team fully established	18/07/16	Complete
5. First task order issued to contractors (Phase 1)	08/08/16	Complete
6. First Site started - Brigh SR (ACE Key milestone)	22/08/16	Complete
7. Update to BIPB - Midway through Omagh / Cookstown (ACE Key milestone)	30/11/16	Complete
8. 2nd ICAT Delivery Programme Board Meeting	30/11/16	Complete
9. 3rd ICAT Delivery Programme Board Meeting	21/03/17	Complete
10. Approval of Business case for phase 2 (Belfast)	31/05/17	Expected 29/6/17
11. Completion of listed Service Reservoir in Omagh / Cookstown	30/06/17	On target
12. PPE1 - Omagh / Cookstown Work Package	31/07/17	On target
13. Update to BIPB - Completion of Omagh / Cookstown	31/08/17	On target
14. PPE2 - Omagh / Cookstown Work Package	31/07/18	On target

Activity completed to date and its outcome

PC15 ICAT delivery programme business case was approved by the NI Water Business Improvement Project Board (BIPB) on the 30th November 2015 with £4.784M of funding to install ICAT technology at approximately 200 sites. The delivery programme is divided into 6 phases based around water supply zones.

The overall project will deliver improved resilience through increased overall network storage volume, reservoirs spending less time in low-low level alarm, potentially quicker reaction time in operational incidents through remote intervention, remote access to controls in poor weather conditions and better overall management of the water network through the ability to manage storage and balance flows across the network.

The project will also contribute to reducing corporate risks and acting as an enabler for Customer Relations Centre (CRC) and Production lines benefit realisation.

The total nett financial savings of the total project is estimated at £1,371K over 10 years made up of reductions in overflows, site visits, overtime and truck rolls.

A dedicated ICAT delivery team was established in July 2016 and the first site installation of Phase 1 (Omagh / Cookstown) took place on the 22nd August 2016. This phase is due for completion by the end of June 2017, with installations having taken place at 50 sites.

To date feedback from Customer Services Delivery Directorate (CSDD) on these sites has been very positive. In addition, other issues (e.g. hydraulic issues) within the network system have been identified and addressed.

Detailed baseline figures for estimating benefits in Phase 1 have been established and will be used to complete PPE stage 2 in July 19.

NI Water provided the Utility Regulator with a presentation on 13 October 2016 giving an overview of the PC15 ICAT programme.

The Business case for Phase 2 (Belfast area) has been completed and will be presented to BIPB in late June 17for approval.

A detailed user manual for the system has been developed and NI Water are in the process of applying for IP for the system.

Planned next steps for delivery

Subject to Phase 2 (Belfast Area) business case approval, the project will enter the on-site delivery in July 2017 and will see the delivery of the iCAT solution an additional 26 sites over the 17/18 period at a total cost of £1,035K.

During October 17 to December 17 Phase 3 (Newry) business case will be developed.

DEVELOPMENT OUPUT
5. Water resource management plan and drought plan
Final Determination: *The company shall complete a Water Resource Resilience Plan that combines a Water Resource Management Plan and Drought Plan.* *- A draft plan should be available for consultation by June 2016;* *- A plan should be complete for publication by April 2017.* *When developing its plan, the company should set out and incorporate its water demand management strategy and its policy on water efficiency measures in homes and businesses.*
PROJECT SUMMARY
The WR&SR Plan sets out how NI Water intends to maintain the balance between the supply and demand for water over the long-term, and the operational and management options and activities available to respond to the short-term critical events such as droughts and freeze-thaw issues. Final Determination target dates have been amended with the agreement of the WR&SR steering group: reflected in the milestones below.

KEY MILESTONES	Target	Status
1. Demand Forecast Results	Nov-15	Complete
2. Deployable Output Results	Mar 16	Complete
3. Outage & Headroom Results	May 16	Complete
4. Options Workshops	June 16	Complete
5. Resilience Workshops	Oct 16	Complete
6. Multi-Criteria Assessments of Options & Strategies	Jan 17	Complete
7. Draft Plan for Internal Review	Feb 18	Complete
8. Plan available for consultation	June 17	On Target
9. Plan published	Oct 18	On Target

Activity completed to date and its outcome

The Water Resource Management Plans & Drought Plan is currently on going. There has been some slippage in the programme and the draft plan should be available for formal consultation in June 2017 with the complete plan published in November 17.

The Steering Group, including various external stakeholders, have been involved in all key decisions throughout the process including a detailed review of the Draft Plan prior to issue for formal consultation.

Planned next steps for delivery

It is anticipated the Draft Plan will be signed off internally for formal consultation in June 17. The start of the formal consultation process is also dependent upon ministerial approval and therefore a resolution through either the reestablishment of the assembly or the appointment of a direct rule minister will be required.

The steering group will continue to be involved in all decisions throughout the process.

DEVELOPMENT OUPUT
6. Sustainable Economic level of Leakage
Final Determination: *The next economic level of leakage assessment shall be prepared in 2016-17 to inform the Water Resource Resilience Plan and revised leakage targets for PC15 from the mid-term review onwards. This should be updated in 2019-20 to inform the company's business plan submission and the establishment of leakage targets for the PC21 period.*
Additional Details:
NIW developed its PC15 business plan based on the SELL 2014 assessment, proposing a leakage reduction profile to reduce leakage below the SELL to reach 153 Ml/d by 2021.
PROJECT SUMMARY
The SELL determination will incorporate all relevant findings with respect to data and methodology improvements and accounting for leakage review comments and relevant changes to the industry best practice since the 2014 SELL determination. The outline scope of work for delivery includes: 1. Data Collection and Quality Assessment 2. Cohort Definition 3. AZNP / HDF 4. Background / Policy Minimum Leakage & Infrastructure Correction Factor determination 5. NRR 2015-16 (already completed) 6. ALC Cost Functions per HDZ 7. Asset Renewal Functions 8. Pressure Management Functions 9. MCoW Calculation 10. Social & Carbon Leakage Management Externalities 11. Environmental & Carbon LR Externalities (short-cut estimation) 12. SR ELL & SELL Calculation 13. SELL Sensitivity & Uncertainty Analysis (climate, MCoW etc.) 14. ELL/SELL Monte Carlo Analysis 15. Draft and Final Executive Reporting 16. Household night use allowances update 17. Customer supply pipe leakage update 18. Review of non-household night use calculations and data/logging requirements to update. The SELL review takes into account the potential for further leakage reductions into the next PC period as part of a least cost plan to meet the future demand for water, whilst minimising environmental impacts.

KEY MILESTONES	Target	Status
1. Project initiation	Apr-16	Complete
2. Phase 1 scoping study documentation	Jul-16	Complete
3. Phase 2 SELL refresh initiation	Jul-16	Complete
4. Draft & Final Executive Reporting	Apr-17	Pending
5. Household night use & customer supply pipe updates	Apr-17	Pending

Activity completed to date and its outcome

NI Water has procured an SELL study, which commenced in April 2016, has completed its scoping stage and currently in process of collating Company data for analysis.

NI Water has met with the WRMP project team, will align with the proposed 7 resource zone boundaries and understand the WRMP project leakage requirements.

SELL analysis completed in June 2017 with outcome agreed. Final Executive Reporting and supplementary technical annexes to be completed July 2017.
Household night use and customer supply pipe update analysis complete. Final project reports and technical annexes to follow in July 2017.

Planned next steps for delivery

Outcomes for the SELL study and the supplementary review of customer supply pipe leakage, household night use and hour-to-day values are complete with final reports and technical annexes expected in July 2017. NI Water plans to undertake a review of SELL in 2018/19 – 2019/20.

DEVELOPMENT OUPUT

7. Controlled Reservoir Safety

Final Determination:
The company shall report progress on the inspection and maintenance of controlled reservoirs under the proposed Reservoir Bill addressing:
- Remedial work on Camlough Reservoir (see Annex K [of the Final Determination]);
- Implementation of the inspection requirements of the proposed Reservoir Bill for controlled reservoirs by the end of 2017/18;
- Completion of maintenance requirements arising from these inspections by 2020/21.Report on any material issues identified in the surveys which require immediate attention which cannot be delivered within the estimate PC15 funding.

PROJECT SUMMARY

- **Remedial Work on Camlough Reservoir.**
  - The contract to rehabilitate the dam core and outlet pipework has just been completed
  - Controlled dam refilling to previous TWL has taken place
- **Implementation of Inspection Requirements of the Proposed Reservoir Bill for controlled reservoirs by the end of 2017-18.**
  - The new consultancy framework has been awarded, with NI Water internal authorisation presently being completed.
  - The appointment of a consultant Panel Engineer is scheduled for July 2017.
  - NI Water will endeavour to complete all inspections by the end of 17/18.
- **Completion of Maintenance Requirements Arising from Inspections by 2020/21.**
  - The intention is to complete all maintenance requirements identified by the Panel Engineer's reports within the PC15 period.
  - However, without knowing the Panel Engineer recommendations it is not yet possible to provide full assurance. Any remedial work requiring extension beyond PC15 will be identified, when known.
  - Previously, extensive consultation with NIEA, Rivers Agency etc. resulted in a long lead-time for the construction work. Planning may also be an issue.
- **Designation of Service Reservoirs and Clear Water Basins Capacity > 10,000m^3 yet to be confirmed by Rivers Agency.**
  - The category designation of individual SRs and CWBs still to be confirmed and agreed with Rivers Agency.
  - Panel Engineer inspections for these assets not currently programmed as a PC15 output.

KEY MILESTONES	Target	Status
1. Remedial Work on Camlough reservoir	June 2017	Complete
2. The award of new consultancy framework	June 2017	Complete
3. Implementation of inspection requirements of the Proposed Reservoir Bill for controlled reservoirs	March 2018	On Target
4. Complete all maintenance requirements identified by the Panel Engineer's reports within the PC15 period subject to funding availability	March 2021	On Target

1. Remedial work on Camlough Reservoir

In 2013, NI Water appointed RPS to carry out a condition assessment of Camlough dam. As part of this assessment, RPS appointed URS to inspect the dam, utilising an All Reservoirs Panel Engineer. The review of the dam concluded that it was built according to the accepted standards of the time, but due to the lack of maintenance and changing design standards a significant upgrade would be required to ensure the safety of the dam.

A high water event in November 2014 necessitated emergency bank stabilisation and pumping to lower the water level to ensure the reservoir embankment did not fail. A contract (JV853 - Intermediate Level Drawdown Pipework) was also completed before the 15/16 winter to reduce the likelihood of pumping over the winter period. This pipe is a permanent part of the

refurbished reservoir, and ensures the water level is easier to manage during the main contract.

A contract (JV853 - Camlough Impounding Reservoir Refurbishment) was awarded to rehabilitate the dam core and outlet pipework, which commenced in May 2016 and has just been completed, in June 2017.

2. Implementation of the inspection requirements of the proposed Reservoir Bill for controlled reservoirs by the end of 2017-18

The Reservoirs Act (Northern Ireland) 2015 received Royal Ascent on the 24th July 2015. Although not all parts of the Act have commenced, Rivers Agency intend to bring forward further regulations in relation to the act within the next couple of years. Previously NIW worked under the spirit of the Reservoirs Act 1975.

NI Water presently has 47 Impounding Reservoirs (as Knockbracken IR was sold during the AIR17 period), in service and out of service, which are recognised by the act as being 'controlled reservoirs'. The definition of this term now broadly includes structures and areas that are capable of holding 10,000m3 or more of water above the natural level of any part of the surrounding land. This covers SRs & CWBs, which is an important change from the 1975 act that only covered Impounding Reservoirs. Although Rivers Agency has a list of SRs and CWBs, belonging to NI Water, both the list and the process of designation between Rivers Agency and NI Water has yet to be agreed. Hence, NI Water has not reported any SRs or CWBs as 'controlled reservoirs' for AIR17.

A project has been raised for the inspections of the in service and out of service Impounding Reservoirs and a contract will be let, following the establishment of the new Consultancy Framework, in July 2017.

3. Completion of maintenance requirements arising from these inspections by 2020-21. Report on any material issues identified in the surveys that require immediate attention that cannot be delivered within the estimate PC15 funding.

Not yet applicable

4. Plans for Delivery of the inspection requirements of the proposed Reservoir Bill for controlled reservoirs

The plans as set out in the PC15 Business Plan submission for the inspection requirements, for the Impounding Reservoirs, and the delivery of any maintenance requirements arising from these inspections are still on target for 2020-21. However, it is to be noted that the extent of the maintenance requirements will not be known until the inspections are carried out. NI Water will advise NIAUR on any material issues identified in the surveys that require immediate attention that cannot be delivered within the estimated PC15 funding.

DEVELOPMENT OUPUT
8. Water mains prioritisation
Final Determination: *The company shall engage with stakeholders on the development of its water mains prioritisation process to incorporate the outcome of PC15 consumer engagement including interruption to supply and dirty water complaints by 31 March 2015.* *The company shall provide updates on the implementation of the prioritisation annually throughout PC15.*
PROJECT SUMMARY
• For PC15, NI Water developed a Watermains Infrastructure Investment Model (WIIM) to identify and prioritise water network rehabilitation investment. WIIM is now operating as a BAU tool for Capital Maintenance Planning. • The model is refreshed annually using updated corporate datasets (e.g. bursts customer contacts, water quality sampling exceedances, etc.) to inform the next year's investment programme. • WIIM1 incorporated dirty water complaints but not DG3 within the methodology. With the exception of DG3, there was a strong alignment between the original WIIM 1 methodology and CEOG analysis (Note: WIIM1 refers to the initial methodology used to identify the investment programmes for 2015/16 and 2016/17). WIIM2 model was modified to incorporate DG3 in April 2016 and used to identify the 2017/18 investment programme. • NI Water acknowledged the omission of DG3 data in the original WIIM1 analysis. NIAUR was informed of the company's intention to revise the methodology approach in a detailed response in September 2014. • A formal presentation delivered to CCNI in September 2014 to provide an update of the WIIM process, including plans to incorporate DG3 in the WIIM2 methodology. Further formal presentations to external stakeholders (CCNI, DWI and UR) were again undertaken recently to achieve buy-in to the WIIM2 methodology. • Ongoing review of the WIIM process ensures the methodology remains focused on NI Water's customer promises.

KEY MILESTONES	Target	Status
1. DG3 incorporated into WIIM 2	March '15	Completed Apr '16
2. WIIM methodology now operating as a BAU.		BAU
3. WIIM2 methodology to be communicated to key stakeholders	May 17	On Target
4. WIIM methodology shared with key stakeholders when changes are made to methodology	As required	BAU

Activity completed to date and its outcome

The company shall engage with stakeholders on the development of its water mains prioritisation process to incorporate the outcome of PC15 consumer engagement including:

A. Interruption to Supply

- CEOG analysis ran in parallel with development of WIIM. Ideally, we would have waited for conclusion of CEOG analysis before completing WIIM and building PC15 business plan but this would have meant missing submission deadline for PC15 business plan.
- Gap analysis was conducted after completion of CEOG analysis in order to ascertain extent to which WIIM was aligned to CEOG analysis.
- Gap analysis established that strong alignment existed, with the absence of DG3 from the model acknowledged by NI Water as an area, which had to be addressed. Other than DG3, no recalibration of WIIM was required as a result of CEOG.

- Although it had initially been considered that issues around geo-coding historic DG3 data would prevent effective incorporation of DG3 into WIIM, extensive consultation within NI Water established a workable solution to DG3. NI Water CSDD staff were closely involved in bringing DG3 into the WIIM model.
- The UR were informed of the proposed approach regarding incorporation of DG3 into WIIM in a detailed response to this and a number of related queries in September 2014 (see PC15 DD Response Annex K 5 11 9 V1.4 Watermain Rehab.doc available on request).
- A formal Presentation was delivered to CCNI in September 2014 in order to inform them of progress around WIIM and explain plans regarding incorporation of DG3 into analysis.

B. Dirty Water Complaints

- Dirty water complaints were incorporated into the model from the outset – this was something that DWI was satisfied with from the outset of the development of WIIM.
- DWI, CCNI, NIAUR and DRD Water Policy were members of a group who were invited to review the tender specification of the first WIIM contract. Engagement continued throughout the development of WIIM.

C. The company will provide updates on the implementation of the prioritisation annually throughout PC15.

- The WIIM 2 project is coming to a conclusion. The WIIM 2 methodology incorporates the “Interruption to Supply” requirement

Improvements contained in WIIM2 (from WIIM 1 Methodology) are summarised below:

- Parent Length segments of water mains are now based initially on Road Junction information, resulting in construction of a NIW corporate dataset, which better models or represents the distribution network for ease of analysis. The Parent Length process reduced the number of pipeline units to be analysed from 390,000 records to 160,000 approximately, simplifying the WIIM process.
- Feedback from recent customer engagement has been incorporated into the WIIM2 approach, ensuring that methodology is customer focused.
- DG3 interruption to supply data is now captured and scored in alignment with NI Water KPIs.
- Scoring matrix is better defined, containing increased weighting for issues relating to Water Quality and DWI involvement.
- Unit Rates can be more easily programmed.
- Pipeline flushing has been incorporated.
- WIIM 2 has the ability to insert ad-hoc pipeline queries in relation to assessment of high priority customer feedback issues, in conjunction with rescoring of programme elements. Ad hoc schemes can be flagged up and separately identified from those generated through ‘bottom up’ analysis.
- Rather than the static list of outputs created during WIIM1, WIIM2 outputs are captured under a Scheme Management Tool, allowing for dynamic management of the overall programme. This will enable reaction to changes in regulatory environment or public expenditure.
- Schemes outputs are now bound into geographical work packages for delivery rather than leaving this to the Verification stage to allow for analysis of the makeup of the Work package at an earlier stage

- DG2 Pumping Schemes will soon include TOTEX costs, as opposed to CAPEX only costs under WIIM1. This has resulted in a significant decrease in promoted pumping scheme count.
- An improved understanding of Water Quality (Fe) issues has resulted in an amended methodology for allocation of incident location to supplying main.

Maximum WIIM 2 Scoring matrix summarised below:

- Scoring for each category is compiled by accruing scores from multiple drivers, with an indication of maximum scores available in each category, shown in the table and diagram below.

WIIM2 category	Maximum Score
Water Quality	2350
Flushing	200
Structural	1100
DG3 interruption to supply	400
DG2 low pressure	450
Complaints	200

NOTE ON SCORING IMPACT: A rough Initial outline analysis of WIIM 2 Schemes to date have shown the split of the overall schemes as 194km of Structural Schemes and 98km of WQ schemes, a 66:34 split.

Impact of the Balance Between WQ and Structural Schemes Due to Scoring matrix and Score Cut Off methodology (To help address Higher Priority Schemes)

WIIM 1 Length of schemes (km)		
	Water Quality	Structural
Profile of Schemes above the Cut-off Score	110	160

WIIM 2 Length of schemes (km)		
	Water Quality	Structural
Profile of Schemes above the Cut-off Score	98	194

- Note: DG2 Work packages are analysed separately

Recent work packages issued to date under the WIIM 2 methodology in 2016 - 17

During the reporting period 2016 - 2017 approx. £30M worth of schemes were passed to our EP Directorate for future delivery.

WPs 2015 WIIM 2.1	DATE PASSED TO EP
Antrim North	November 2016
Antrim South	November 2016
Banbridge South Armagh	November 2016
Craigavon	November 2016
Fermanagh North	November 2016
Fermanagh South	November 2016
Lurgan Moira	November 2016
Tyrone North	November 2016

WPs 2015 WIIM 2.1	DATE PASSED TO EP
Tyrone South	November 2016
Tyrone West	November 2016
Antrim Ballyclare	March 2017
Lisburn	March 2017
Newtownards	March 2017

Note: Further WIIM 1 Work packages were issued in April 2016 (outside the remit of this report)

Also see line 2 response, which references Water Mains Rehab programme.

Planned next steps for delivery

The company shall continue to adapt the WIIM prioritisation process in order to continually develop the rehabilitation programme for PC15 delivery.

Schemes Tool

The Schemes Management Tool, developed under the WIIM project is held by NI Water's Asset Management section and is available for analysis on request. The Tool has been developed to hold all vital scheme information and produce outputs as required by the end-user.

DEVELOPMENT OUPUT

9. Sustainable Catchment Management

Final Determination definition:
The company shall report progress on Sustainable Catchment Management annually. The report shall set out the action the company has taken and its plans for subsequent action. The report shall identify the benefits in terms of activity, improvements in raw water quality and reduction of peak flows.

PROJECT SUMMARY

- **Catchment Management Studies:**
  The aim is to undertake a scoping and planning study in each drinking water catchment, using the UKWIR framework, identifying future SCaMP NI projects to sustainably improve raw water quality. In PC15 the Catchment Management Studies are ahead of target, 18 have been completed as follows:
  - 2013/14 – Killylane, Dorisland and Clay Lake WTW's
  - 2014/15 – Derg, Lough Braden, Caugh Hill, Carmoney and Seagahan WTW's
  - 2015/16 – Altnahinch, Drumaroad and Fofanny WTW's
  - 2016/17 - Dunore Point, Castor Bay, Moyola, Ballinrees, L Macrory, L Fea and Glenhordial WTW's
- **SCaMP NI Interventions:**
  - Actions to reduce pesticides in raw water; best practice advice at agricultural shows, rush control events, farm engagement visits, press articles and amenity sector liaison. A farm liaison officer has been temporarily employed and a weed-wiping trial planned in summer 2017 and 2018. There has been positive PR and slightly reduced MCPA residuals in raw water in 2016.
  - CAFRE & NIW joint trials carried out to research rush control methods with pollution monitoring. These trials are ongoing. Results will inform best practice strategy for DAERA and NIW.
  - Wildfire initiatives have been undertaken in the Mournes to carry out effective wildfire control to prevent damage to habitats and raw water quality.
  - A number of riparian planting projects have been undertaken to reduce bankside erosion and create wildlife buffer strips along watercourses to reduce diffuse pollution.
  - A blanket bog restoration project has been completed which has improved peatland habitats and there are early signs of resultant improvements in raw water quality at peak times.
  - Habitat enhancement projects carried to meet environmental targets and improve water quality.
- **EU INTERREG VA Funding:**
  - A successful bid for €4.9m 'Source To Tap' INTERREG VA cross border SCAMP project in the Erne and Derg catchments involving a Land Incentive Scheme, Peat and Forestry pilot projects, UKWIR Catchment analysis and community engagement aspect to improve water quality. This project is beginning in 2017, with completion by 2022.
  - €175k funding obtained in partnership with RSPB NI for 'Cooperating Across Borders for Biodiversity' INTERREG VA project. This will involve restoration of the entire Dungonnell peatland catchment to improve habitats and raw water quality. This project is beginning in 2017, with completion by 2021.

KEY MILESTONES	Target	Status
1. Completion of Catchment Management Studies as per schedule	March 2018	On Target
2. Commencement of programme for completion of SCaMP NI interventions as a result of Catchment Management Studies	March 2018	On Target

Sustainable Catchment Management (SCaMP)

NI Water is currently developing Catchment Management Studies for each of its active water catchments and will follow this with catchment plans for 'mothballed' impounding reservoirs. These plans will give the detail on how the catchment land will be managed going forward to give maximum benefit to NI Water and ensure that legislative requirements are met.

Diffuse water pollution and insensitive land management may pollute surface and ground water supplies with substances such as nutrients, pesticides and microbial pathogens and increase colour, turbidity and suspended solids in abstracted water. These increase capital and operating costs of water treatment, increase the quantity of effluent and waste produced, and increase the carbon footprint of the industry. The aim of the Catchment Management Studies is to undertake a scoping and planning study of the catchment, using the approach advocated in the UKWIR framework for quantifying the benefits of catchment management, to establish the basis for a programme of catchment management that provides business benefit to NI Water. The outcome of this project will provide a basis for the preparation of business plans for catchment management in support of drinking water source protection and, in part, for meeting other WFD and corporate obligations for PC15 and beyond.

The Catchment Management Studies are being undertaken on a prioritised basis. The prioritisation rationale involves collating a series of details on each catchment and drivers needed to justify SCaMP projects, as follows:

- PRIMARY DRIVER 1 - Protect or improve the raw water quality abstracted by NI Water (Factors considered: DWI CPEO, Algae Blooms, Colour/Turbidity, TOC, Pesticides)
- PRIMARY DRIVER 2 - Protect or improve the reliability or quantity of raw water abstracted by NI Water (Factors considered: Reliability of source, Potential to improve reliability risk, Quantity, Drought Risk, Potential to remedy quantity risk.
- PRIMARY DRIVER 3 - Reduce the risk to the quality, reliability or quantity of raw water abstracted by NI Water (Factors considered: Tourism, Livestock Agriculture, Arable Agriculture, Forestry, Residential Dwellings, Industrial, Hydrocarbons, Rubbish / Fly tipping, Effluent, Septic Tanks.
- PRIMARY DRIVER 4 - Aid NI Water in managing its land portfolio and deliver its statutory responsibility under national and international obligations to protect and manage the natural environment (Factors Considered: ASSI, AONB, SPA, SAC, RAMSAR, percentage of catchment land owned by NI Water, Habitat protection or creation, Managing lands as 'carbon sink', Biodiversity management, Invasive species management).
- SECONDARY DRIVER - NI Water working with other stakeholders to improve the overall quality of the catchments from which it draws water (Non-NI Water Owned Land in Catchment). (Factors Considered: Habitat protection or creation, Biodiversity management, improved farming practices, Recreational activities, Revenue creation for NI Water.

Programme for delivery of Catchment Management Studies

During PC15 NI Water will deliver:

- *23 catchment plans (live catchments) to be delivered in first 3 years of PC15.*
- *23 catchment plans (unused catchments) to be delivered in years four to six.*

NI Water is on track to meet the delivery of the catchment plans as detailed in the programme below:

Category	Priority	Water Treatment Work Name	Catchment Management Study	Target Delivery Date	Comments
Operational WTW's	1	Killylane	2013/14	31/03/2014	Completed 31/03/14
Operational WTW's	2	Dorisland	2013/14	31/03/2014	Completed 31/03/14
Operational WTW's	3	Clay Lake	2013/14	31/03/2014	Completed 31/03/14
Operational WTW's	4	Derg (Inc Strule)	2014/15	31/03/2015	Completed 31/03/15
Operational WTW's	5	Lough Braden	2014/15	31/03/2015	Completed 31/03/15
Operational WTW's	6	Caugh Hill	2014/15	31/03/2015	Completed 31/03/15
Operational WTW's	7	Carmoney	2014/15	31/03/2015	Completed 31/03/15
Operational WTW's	8	Seagahan	2014/15	31/03/2015	Completed 31/03/15
Operational WTW's	9	Altnahinch	2015/16	31/03/2016	Completed 31/03/16
Operational WTW's	10	Drumaroad (inc Silent Valley, Annalong & Lough Island Reavey)	2015/16	31/03/2016	Completed 31/03/16
Operational WTW's	11	Fofanny	2015/16	31/03/2016	Completed 31/03/16
Operational WTW's	12	Dunore Point	2016/17	31/03/2017	Completed 31/03/17
Operational WTW's	13	Castor Bay	2016/17	31/03/2017	Completed 31/03/17
Operational WTW's	14	Moyola	2016/17	31/03/2017	Completed 31/03/17
Operational WTW's	15	Ballinrees	2016/17	31/03/2017	Completed 31/03/17
Operational WTW's	16	Lough Macrory	2016/17	31/03/2017	Completed 31/03/17
Operational WTW's	17	Lough Fea	2016/17	31/03/2017	Completed 31/03/17
Operational WTW's	18	Glenhordial	2016/17	31/03/2017	Completed 31/03/17

Category	Priority	Water Treatment Work Name	Catchment Management Study	Target Delivery Date	Comments
Operational WTW's	19	Carron Hill	2017/18	31/03/2018	In Progress - Target completion 31/03/18
Operational WTW's	20	Rathlin	2017/18	31/03/2018	In Progress - Target completion 31/03/18
Operational WTW's	21	Dungonnell	2017/18	31/03/2018	In Progress - Target completion 31/03/18
Operational WTW's	22	Killyhevlin	2018/19	31/12/2018	Being done as part of Source To Tap INTERREG VA Project - Target Catchment Characterisation Completion 31/12/18
Operational WTW's	23	Belleek	2018/19	31/12/2018	Being done as part of Source To Tap INTERREG VA Project - Target Catchment Characterisation Completion 31/12/18
Abandoned WTW's	24	Altmore (High)	2018-19	31/03/2019	Planned
Abandoned WTW's	25	Altmore (Low)	2018-19	31/03/2019	Planned
Abandoned WTW's	26	Ballintemple IR	2018-19	31/03/2019	Planned
Abandoned WTW's	27	Ballydoolagh (IR)	2018-19	31/03/2019	Planned
Abandoned WTW's	28	Ballysallagh Lower	2018-19	31/03/2019	Planned
Abandoned WTW's	29	Ballysallagh Upper	2018-19	31/03/2019	Planned

Category	Priority	Water Treatment Work Name	Catchment Management Study	Target Delivery Date	Comments
Abandoned WTW's	30	Ballyversall	2018-19	31/03/2019	Planned
Abandoned WTW's	31	Boomers Reservoir	2018-19	31/03/2019	Planned
Abandoned WTW's	32	Church Road	2019-20	31/03/2020	Planned
Abandoned WTW's	33	Conlig Lower (IR)	2019-20	31/03/2020	Planned
Abandoned WTW's	34	Conlig Upper	2019-20	31/03/2020	Planned
Abandoned WTW's	35	Craigahulliar	2019-20	31/03/2020	Planned
Abandoned WTW's	36	Creightons Green (IR)	2019-20	31/03/2020	Planned
Abandoned WTW's	37	Dunalis	2019-20	31/03/2020	Planned
Abandoned WTW's	38	Killea (WTW)	2019-20	31/03/2020	Planned
Abandoned WTW's	39	Knockbreckan	2019-20	31/03/2020	Planned
Abandoned WTW's	40	Leathemstown	2020-21	31/03/2021	Planned
Abandoned WTW's	41	Lough Cowey	2020-21	31/03/2021	Planned
Abandoned WTW's	42	Lough Money	2020-21	31/03/2021	Planned
Abandoned WTW's	43	Portavoe IR	2020-21	31/03/2021	Planned
Abandoned WTW's	44	Quolie (North)	2020-21	31/03/2021	Planned
Abandoned WTW's	45	Quolie (South)	2020-21	31/03/2021	Planned
Abandoned WTW's	46	Stoneyford Reservoir	2020-21	31/03/2021	Planned

Benefits of Catchment Management

NI Water manages 8,615 hectares of land. NI Water has embraced and adopted Sustainable Catchment Area Management Planning (SCaMP) and is seeking to build on the foundations of this put down in PC10 and PC13. Through the SCAMP NI approach, NI Water seeks to:

- Maximise the ecosystem services gained from its land holdings
- Meet its obligations under environmental legislation
- Improve operational efficiency through innovative projects
- Improve raw water consistency and quality

The benefits of the SCaMP project will be realised in the long-term, but the Catchment Management Studies completed to date have recommended a number of key outputs or recommendations, which are now being implemented in the form of the SCaMP projects and resultant benefits listed below:

Benefit 1 - NI Water will, over time, have improved raw water quality arriving at its Water Treatment Works.

Example Project – Seagahan Weed Wiping Trial Project

As a trial project NI Water are carrying out a weed-wiping project in Seagahan WTW drinking water catchment area in Co Armagh. NI Water is working with The Water Catchment Partnership and the farming industry as part of an innovative campaign to help reduce levels of MCPA in the Seagahan Reservoir catchment area. It is planned to offer a free weed-wiping service using Glyphosate, as an alternative to spraying MCPA, to demonstrate an alternative effective rush control method which causes less pollution.
The overall aim is to show that pesticide levels can be reduced in the reservoir without the need for more expensive water treatment processes. This can then be used as a test project to demonstrate the benefits of NI Water working together with farmers and possibly doing more of these type of initiatives in future in other areas. The project will have a Farm Liaison Officer working with farmers and land managers to manage the weed-wiping and promote better advice on handling, applying and disposing of grassland sprays, guidance on mechanical control of rushes and improving land condition to addressing the underlying causes of infestations. The project will be beneficial in comparing best techniques with other projects in N Ireland and used to inform individual aspects of the INTERREG VA Source To Tap project and other SCaMP NI projects going forward to ensure value for money in effectively reducing MCPA levels in watercourses.

The 2-year project in Summer 2017 and 2018 will be managed by NI Water but will be carried out in conjunction with the Water Catchment Partnership. This involves representatives from Ulster Farmers Union, Northern Ireland Environment Agency, Department of Agriculture, Environment and Rural Affairs, College of Agriculture, Food and Rural Enterprise and the Voluntary Initiative. All of these stakeholders will input knowledge and expertise which are vital to the success of the project and their cooperation and assistance is appreciated and valued by NI Water. The aim of the WCP is to deliver one message incorporating the ethos from all organisations to effectively tackle the problem of pesticides in the water environment, particularly in Drinking Water catchment areas, communicating with householders and farmers to raise awareness and provide best practice guidance on grassland pesticide use.

The project will bring the following benefits for NI Water:

- Reduced risks of DWI enforcement by demonstrating a proactive approach in the fight against MCPA
- Improve Water Quality Compliance in Seagahan catchment
- Improve Water Quality Compliance in other catchments across NI by raising awareness
- Reduced capital costs at WTW’s for MCPA removal
- Reduce operational costs at WTW’s for MCPA removal
- Influence and change farm practices to create a lasting legacy
- Build relationships with key stakeholders
- Environmental benefits for aquatic habitats and ecosystems

Benefit 2 - NI Water will, over time, reduce the risks of raw water quality incidents effecting WTW output capability.

Example Project 1 - Extensive areas of Forest Service lands exist within NI Water drinking water catchment areas. Forest Service felling and replanting activities require careful planning in order to avoid any detrimental impacts on raw water quality that is abstracted

for water treatment. In order to minimise risk to water quality guidelines have been agreed between NIW and Forestry Service in order to protect the raw water quality at each catchment. Work is ongoing with Forestry Service to improve tree felling and replanting techniques resulting in fewer high colour and turbidity incidents when forestry activities are carried out, particularly at Lough Bradan WTW. This improvement will be particularly evident during times of peak flows and high rainfall events.

Example Project 2 – A pilot project is being developed at Lough Bradan WTW to monitor quality at each of the individual intakes, then install online quality monitors and automatically control flows to the WTW, maximising use of technology to ensure that the best possible water quality is received at the WTW intake point. Improving the raw water quality in the water supply network and monitoring water quality at each abstraction point will allow the best quality water to be abstracted and will assist in reducing treatment costs.

Benefit 3 - NI Water will, over time, see an improvement in the reliability of water quantity from its upland sources.

Example Project - 'Co-operation Across Borders for Biodiversity Project' INTERREG VA Project
NI Water have been working in partnership with Royal Society for the Protection of Birds Northern Ireland (RSPB NI) and other partners on a project funded by INTERREG VA and managed locally by the Special European Union Programmes Board (SEUPB). The project is called the 'Co-operation Across Borders for Biodiversity' (CABB) Project and will begin in 2017, with completion in late 2021.

The overall objective of the CABB project is to bring about the recovery of protected habitats (active raised and blanket bog) and priority species (breeding waders and marsh fritillary at key sites) on a cross border and cross country basis. The overall CABB project has been awarded €4.6m of EU funding for projects in Scotland, N Ireland and the Republic of Ireland. CABB will contribute to delivering the EC Birds and Habitats Directives and Biodiversity Strategies in each of the three countries and will also link with strategies for climate change mitigation and adaptation and sustainable development in the three countries, as well as Programme for Government targets.

The NI Water aspect of the project will involve a €1.75k project to restore of the entire Dungonnell WTW catchment area at Garron Plateau on the Antrim Hills, which is in the catchment of Dungonnell WTW. NI Water owns 2000ha of the Garron Plateau SAC and previously 72ha of land has had drain blocking work done. Through CABB, an additional 444ha of blanket bog will be managed by blocking 38.4km of drains. NI Water will oversee the drain blocking and also aim to produce an information booklet highlighting how the work was done and the benefits delivered.
Garron Plateau is the largest expanse of intact blanket bog in Northern Ireland and it is home to protected birds of prey and rare plants such as marsh saxifrage and bog orchid. NI Water, working with the assistance of the RSPB NI and INTERREG VA aim protect and restore the peatland on the plateau, ensuring that the whole catchment is managed sustainably.
The CABB project will restore the natural hydrological conditions by blocking drains using peat, stone and sheet dams to raise the water table. This results in raising the water table and the "re-wetting" of the bog, promoting colonisation by Sphagnum moss, an essential component of a functioning bog. The creation of these peat dams reduces the water velocity in the drains and allows more settlement time. This reduces runoff and improves raw water quality and reliability by improved regulation of supply through the retention

effects of the bog. This will result in cost savings at the treatment works, as the requirement for chemical treatment to remove colour from the raw water will be reduced.

Benefit 4 - NI water will work toward meeting its environmental obligations in its catchments.

Example Project - There is an annual plan to control invasive species, rhododendron and cotoneaster, in the Mournes catchment landholding to ensure designated land is managed and environmental obligations are met. Work is currently underway to digitally map this work and monitor the progress in controlling these invasive species.

Benefit 5 - NI Water will work with stakeholders to improve the overall condition of its catchments.

The Eastern Mournes Wildfire project is carried out to reduce the risk of wildfires damaging wildlife habitats and adversely affecting raw water quality from the catchment. This project was carried out with a range of stakeholders, e.g. NIFRS, NIEA, Mourne Heritage Trust, UFU, DAERA, etc. Work is currently underway to digitally map the areas affected by wildfires and monitor areas where deliberate actions have been undertaken to control wildfires.

Benefit 6 - The people of Northern Ireland will benefit from improved biodiversity in Northern Irelands Water's land and, over time, and a reduction in the costs associated with treating raw drinking water.

Example Project – Work is ongoing in liaison with the Woodland Trust to plant riparian strips along watercourses to enhance habitats, resulting in enhanced biodiversity and improved raw water quality. This improves raw water quality through buffer zones to protect from pesticide pollution, bankside erosion and livestock encroachment/excretion in the waterway. This improvement will be particularly evident during times of peak flows and high rainfall events. One example is the riparian planting project at the Glenedra River where NI Water, The Woodland Trust and The Loughs Agency co-operated to complete a riparian tree planting project. NI Water abstract water from the Glenedra River, where water quality can frequently be poor due to bankside erosion and instability of the river. In order to improve water quality for abstraction, wildlife habitats and aquatic life, a 3.89 ha site was planted with native broadleaf trees along the banks of the river. Trees planted along river banks can provide many water management benefits, acting as a physical barrier, preventing pesticides drift from reaching watercourses and tree roots help stabilise river banks and create structural complexity in the water habitat. There is a resultant reduction in the water discolouration and sediment coming into Water Treatment Works. The cost of this type of project is small to NI Water as the other partners involved contribute significantly through internal and external funding sources.

The following SCAMP projects are planned for 2017/18:

1. Catchment Management Plans - Engage consultants to assess and collate information on all WTW's catchments where raw water is currently abstracted. Catchment Management Plans to be completed using the UKWIR approach (WR26A – "Quantifying the Benefits of Water Quality Catchment Management Initiatives"). Outcome is a list of recommendations for catchment works to improve raw water quality and enhance ecosystems/habitat. This should include a summary of land area, land use, risks to drinking water safety, to align with NIW catchment prioritisation spreadsheet. There are 23 catchment studies to be completed in total on active drinking water catchment areas. By the end of the 2016/17 financial year eighteen

catchment studies have been completed within the PC13 and PC15 period to date and it is proposed to move ahead with a further 3 studies in 2017/18. The completion of these studies will generate recommendations, which will then be actioned later in the PC15 period. It is also proposed to begin characterising the catchment areas which NI Water own but where the WTW has been abandoned. These studies will be much simpler and will primarily focus on legal requirements for designated landholdings and meeting of our SCAMP and biodiversity aims and objectives.

2. Mourne Wildfire Containment - The Silent Valley drinking water catchment area and surrounding areas of the Mournes were subject to wildfires, which damaged between 8-10 square kilometres of upland heath in the Mournes during April/May 2011. NI Water, in conjunction with Mourne Heritage Trust (MHT), NIEA and NI Fire and Rescue Service (NIFRS), commissioned a report by Wildfire Advisory Services. This paves the way for a focused and innovative approach to managing wildfire outbreaks in the wider Eastern Mournes area, considering practical wildfire management and emergency response within the drinking water catchment. In order to achieve the objectives, work is required to action the recommendations from the Wildfire Containment Report. This report has been adopted in agreement with NIEA, NIFRS, MHT and NIW. NIW are committed to proceeding with implementation as part of this partnership. During the 2017/18 period, it is proposed to carry out controlled burns to reduce the risk to the water catchment area and consider GIS mapping of areas damaged by wildfire and areas where mitigation measures have been carried out.
3. Mourne Invasive Species Control - The expansion of Rhododendron and Cotoneaster is of concern to upland heath land management for a number of reasons. There is a legal obligation for NIW to control these invasive species on our landholdings. Work has been ongoing in recent years, but the work needs to continue to further control invasive species and prevent re-colonisation. This is particularly important to help ensure that native plants have the opportunity to establish within the catchment.
4. Mournes Heathland Management - NI Water have developed a successful working relationship with Mourne Heritage Trust (MHT) and work together to mutual benefit in managing the Silent Valley catchment which is owned by NI Water. MHT have recently been successful in obtaining funding of €100k annually over the next 3 years through an Interreg Northern Periphery and Arctic programme (NPA) funding application, which was supported by NI Water. This will involve a project to carry out environmental enhancements work on NI Water owned land in the Mournes, maintenance on paths were works has been done, stitch in time to prevent erosion, some larger erosion work, develop a management plan and use the project to develop knowledge and skills and training. This will bring in a significant value of work on catchment land at no cost to NI Water. It is proposed that NI Water carry out some habitat restoration work under the SCAMP project to add value and support the MHT project and to help develop a ‘leverage’ ethos, whereby NI Water can contribute a relatively small amount, allowing NGO’s to attract larger funding sources.
5. Riparian Planting – The SCaMP NI team successful carried out riparian planting at sites in Caugh Hill and Dorisland catchments in 2016/17. These areas enhance biodiversity and help raw water quality by reducing erosion and livestock encroachment. These projects were carried out alongside NGO’s and were able to avail of match funding. It is proposed to do more of this type of work in 2017/18 as opportunities arise.

DEVELOPMENT OUPUT
10. Minimising the water quality risk from lead pipes
Final Determination: *The company shall provide an annual report detailing how the implementation of its strategic lead policy and lead replacement programme is progressing. This should explain how the company is managing this activity and targeting hotspots to maximise benefits and how it is assessing the improvements delivered by the work undertaken.* *The report shall also provide details of the activity undertaken by the company, in conjunction with other stakeholders, to develop and implement a strategic risk based approach for addressing compliance issues associated with private supply pipes and domestic distribution systems.*
Additional Details:
The lead replacement programme is 'Business As Usual' with analysis being undertaken by Asset Management and briefed for delivery to Engineering Procurement. To date the target number of lead replacement pipes per annum has been achieved.
PROJECT SUMMARY
• Annual update on the lead pipe replacement programme is provided through the company's AIR Return*: 'AIR 16 Submission -2015-2016 Table 47 - Line 10 – Minimising the Water Quality Risk from Lead Pipes'.* • To better inform DFI Water Policy Unit, as part of the Long Term Water Policy Strategy, a Lead Service Replacement Pilot has taken place at Craigyhill Bungalows, Larne. As part of the pilot the complete service pipes, including the Supply Pipes, were replaced to assess the cost and benefits of such an approach with a view to grant scheme being established. A Draft Internal Report on the pilot has been produced for comment prior to issuing to DFI.

KEY MILESTONES	Target	Status
1. Annual reporting provided through the AIR Return process.	Annually	BAU
2. Complete pilot study for Dfl policy development.	March 16	Complete
3. Develop summary document and recommendations to assist Dfl in developing policy.	March 17	Ongoing

Minimising the water quality risk from lead pipes

Part 1 – Progress of the Implementation of Strategic Lead Policy and Lead Replacement Programme

The NIW Lead Project comprised a desk top survey (alongside proactive targeted sampling) of available data from NI Water Corporate Systems relevant to lead services and analyse and collate information and data obtained onto Mapinfo layers (In Open Format) to compile a prioritised and costed schedule of lead replacements for PC15.

Work also included Scheme Prioritisation and Site Verification work including visual inspections and sampling work.

The methodology includes: -

- Prioritise by highest exceedances and densest clusters
- Desktop exercise to help focus on the areas required for further sampling verification and review
- If the network distribution pipe is considered unsuitable – pass the scheme over to Engineering Procurement Watermains Rehabilitation Team for replacement of the distribution main and the related communications pipes together.
- On site sampling and inspections to further verify priority areas
- Ensure value for money in delivery of this work by clustering work where possible

Prioritisation

The Asset Performance Networks Water Team compiled a Specification for this approach and, following a Tender exercise; Consultants were appointed to deliver the required outputs.

A quantitative, risk-focussed analysis procedure to identify lead “hotspots” across Northern Ireland was then commenced. The focus of this approach was to use available datasets in a transparent and cost effective process, which is easily repeatable or editable in the future using updated datasets or incorporating new data as it becomes available.

Taking cognisance of best industry practise and recent DWI guidance, it was agreed between NIW and the Consultant, that greater emphasis be placed on using an evidence based approach, such that once the initial hotspots were prioritised, a second stage involving customer site surveys and a water quality sampling exercise be undertaken to validate the assumptions. This approach facilitates an assessment of risk based on the combination of the likelihood (probability) of occurrence and the consequence (extent and seriousness) of the failure on the quality of water received by NI Water’s consumers.
The following staged approach was adopted.

1. Data Gathering and Desktop Analysis,
2. Prioritisation of those hotspots based on probability of lead occurrence,

The various datasets were spatially analysed using MapInfo software to create “hotspot” areas based on combining clusters of unusually high concentrations of point data, such as water quality lead exceedances (>10µg/l) and watermains of a known age (i.e. those installed pre 1920). The digitisation of hotspot polygons allowed the large datasets to be rationalised into a manageable number of areas, which contained a high probability of lead occurring. A range of polygons was initially created by spatially querying various lead indicator criteria or where lead piping was confirmed to be present. They were then manually reviewed to validate the information and edited by enlarging or enclosing each, based on similar cohorts

Assignment of a prioritisation score to each dataset was derived based on the significance of each as an indicator of the likelihood of lead occurring or its impact to public health. An iterative sensitivity analysis process was also conducted to test the robustness of each assessment criteria and understand the causal relationships between datasets.
The scoring matrix assigned to each is described below.

- **Watermains Age**

Lead was used throughout Northern Ireland up until ~1975 for connecting a property to the water supply main and for internal plumbing. Lead’s availability, inherent strength, malleable nature and corrosion resistance properties meant it was favoured over other metals such as copper and brass.

Accordingly, watermains of a certain age have been assessed as a good indicator of the presence of lead and the criteria in Table 1 below were used to score the age of watermain criteria. To ensure that each polygon was assessed using its predominant watermain age type, those polygons that contained only a small % of a differing age type were discounted, by applying a rule that selected the most common type of watermain age within the polygon.

Criteria Age of watermains	Score
Majority of Mains in Polygon laid after 1975	0
Majority of Mains in Polygon 1970 to 1975	1
Majority of Mains in Polygon laid 1950 to 1970	2
Majority of Mains in Polygon laid 1920 to 1949	3
Majority of Mains in Polygon laid before 1920	4

Table 1: Age of Watermain Score

- **Historical LIMS Water Quality Data**

NI Water LIMS data provided information on 25,800 water quality sample records from 2002 to 2014, which were scored based on the total numbers of samples per polygon (likelihood) and the lead parameter result (severity of impact).

Criteria Lead Result (µg/l)	No of Occurrences within Polygon(1)	Weighting Factor(2) *	Score (3)*
0	x	0	0
0.00 - 9.99 ug/l	x	0.1	1
10 -14.99 ug/l	x	1.0	2
15 - 49.99 ug/l	x	3.0	3
> 50 ug/l	x	5.0	4

(*Note The overall score is = (1 x2 x 3)

Table 2: Historical Lead Water Quality Density Score

Weighting factors were used to negate the influence of large numbers of sample data skewing the overall scores.

In order to prioritise the water quality samples based on the severity of identified water quality results the polygons were also assigned a score based on the highest exceedances. Approximately 4% of the total water quality records exceeded the Prescribed Concentration Value (PCV) of 10µg/l, with 1% (approximately 250 samples) exceeding 39µg/l.

Water quality results were also analysed to remove,

- Where a new main had been laid since the sample had been taken, (typically under the Watermains Rehabilitation Programme). In this case, it has been assumed that the communication pipe was replaced during the process.
- A more recent sample at the same location superseded the previous sample,

- **Lead Failures by DMA**

In order to apply a holistic approach across the entire water distribution system each DMA was initially scored by the percentage of lead exceedances within its boundary, relative to the total number of water quality samples taken. NI Water has approximately 1,380 DMAs which encompass its distribution network and each DMA with the exception of some trunkmain DMA's, has water quality results with which to compare. Analysis would identify the worst performing DMA, such that any potential replacement scheme would provide water quality betterment to customers within the entire DMA, and potential neighbouring or cascading DMA. The scoring system is presented in Table 3 below.

Criteria Lead Result (µg/l)	Weighting Factor (2)	Score (3)*
<10 (contains 97% of WQ samples)	0	0
10 – 20.19 (contains 1% of WQ samples)	0.5	1
20.20 - 38.99 (contains 1% of WQ samples)	1.5	2
> 39 (contains 1% of WQ samples)	2.0	3

(* Note The overall score = 2 x 3)

Table 3: Water Quality Results

A thematic illustration of those DMA's ranked by the highest percentage of water quality failure is available on request. The output showed that the largest numbers of DMA with a higher percentage of failures are concentrated in the Greater Belfast area.

- **Northern Ireland Housing Executive (NIHE) Properties**

NIHE has endeavoured to provide an extract from its digital asset dataset, which details the ownership of properties in Northern Ireland and the age of the dwelling. Once received this data can be used to verify assumptions regarding the age of watermains and identify additional areas where lead may be present.
NIHE has confirmed that it has no capital works planned in the short-term (2015) to replace kitchen or private supply pipes. Accordingly, there appears to be limited opportunity to coordinate the replacement of customer communication pipes with NIHE private supply pipes where practical, in the short term.

- **Watermains Rehabilitation Programme**

The NI Water Watermains Rehabilitation Programme Team provided detailed information in relation to the numbers of lead communications pipes replaced on each rehabilitation / replacement scheme installed between the years 2005 to 2014. Once cleansed the data provided details on some 8,150 lead pipe replacements undertaken during the Watermains Rehabilitation Programme and following a digitisation exercise the information was spatially mapped to link to the NI Water PC13 Schemes Core MapInfo table.

92% of the WMRP schemes, which involved replacement of lead communication pipes, occurred in the Greater Belfast area.
In contrast to the other data sources that were potential indicators of lead presence, this source confirmed that lead didn't exist and as such, it wasn't possible to assign a score to each polygon. In this case, the data was used to manually review each lead hotspot to,

- identify hotspots for removal following confirmation of rehabilitation (For the most part the NI Water AIC GIS data confirmed this, though this process captured any recently constructed mains that hadn't yet been returned to the NI Water AIC),
- Identify additional (neighbouring) polygons where lead was likely to be present using similar water main cohorts.

- **Corporate Asset Register (CAR)**

NI Water staff queried the Corporate Asset Register (CAR) to identify those properties that had lead communication pipes replaced or had combined services separated through opportunistic or business as normal services, since 2009.
The information was geo-referenced and analysis was targeted to identify the polygons with the largest remaining numbers of lead communication pipes, such that any potential replacement scheme would provide maximum water quality betterment to customers within the entire DMA. The scoring system is presented in Table 4 below.

Criteria Opportunistic Lead Communication Pipe Replacement	Nr of Polygon Properties with Lead Communication Pipes replaced	Score
Polygon Contains confirmed Lead Communication Pipe Replacements	No of Properties	5
Polygon Contains no confirmed Lead Communication Pipe Replacements	No of Properties	0

Table 4: Opportunistic Lead Communication Pipe Replacement Score

- **Sensitive Customers**

Given the well documented increased risk to children from increased levels of lead in drinking water (*Childhood Lead Poisoning, World Health Organisation, 2010*) a list was created of sensitive non-domestic properties from the Pointer NI dataset, which may present increased levels of risk to children. Such non-domestic properties include,

- Primary Schools,
- Nursery Schools / Day Care Centre,
- Sure Start Centre's,
- Children's Activity Centre's,
- Playgroups.

The scoring system is presented in Table 5 below.

Criteria Sensitive Property	Score
Yes	3
No	0

Table 5: Sensitive Property Score

- **Visible Lead Score**

A dataset was then created by combining information obtained from previous NIW water quality customer surveys and Customer Complaints, which details where lead pipe material has been confirmed at either the communication pipe, the service pipe or internal riser (typically at the kitchen or first floor bathroom). Given this was the only data source that confirmed the presence of lead at a particular property (in advance of the site surveys) it received the highest weighted score, where lead was deemed to be present. The scoring is provided in Table 6 below.

Criteria Lead Pipes Visible	Score
Yes	10
No	0
Unknown	0

Table 6: Lead Pipe Visible Score

To date this Project has identified and assessed 1,680 lead hotspot areas, which encapsulate some 92,400 properties across Northern Ireland (average of 55 properties per polygon). The hotspots have been prioritised for the next phase of the Lead Pipe Replacement Programme (Water Quality and Customer Site Survey) using the prescribed scoring methodology.

DWI Stakeholder Discussion

This approach was presented in detail, alongside the proposed Work packages, to DWI on 26th March 2015
The "Mapinfo" geographical presentation of the outputs and this associated methodology were very positively received at this session.

Pilot Study "Craigyhill Bungalows"

A Lead Service Pilot has recently taken place at a small development (40 or so properties)," Craigyhill Bungalows", Larne, to identify the benefits and associated costs of replacing the communications pipe within private property.

As part of the pilot, in addition to replacing the public side communications pipe, NIW replaced the private communications pipe to internal boundary of the properties. It should be noted this did not include the internal pipework. This was carried out at the 18 privately owned houses within the development. The remaining houses within the development are NIHE owned, and NIHE replaced both private communications pipework and the internal pipework. NIW carried out first draw sampling at the properties, both pre and post work.

A draft report following the pilot lead-replacement project at "Craigyhill Bungalows" has been completed and is currently being reviewed by NI Water Governance mechanisms. As suggested in last year's report the initial outputs suggest there is limited benefit in replacing private communications pipe unless all internal lead within a property is removed. As soon as the report is approved, it will be forwarded to DfI for further consideration.

These activities and the associated forums will then inform the future review strategy in this area and will help inform the approach in terms of how frequently NIW might re-sample and also the timing and volume of samples that are required, to get a clear picture of the effect that this programme of work has had on lead reduction.

Planned next steps for delivery

The company will continue with its Proactive Communications Lead Pipe Replacement Programme at circa £1 million per year.

As soon as the "Craigyhill Bungalows "Pilot Lead replacement scheme report is approved, it will be forwarded to DFi for further consideration.

PC15 Proactive Replacement Programme Proposed by Asset Management -See Table 11 for Installation Progress

	Prioritised Hotspot Location	Works Package Issued	Date Issued to	Water Quality Survey	Lead Comms Pipes Submitted	Cost @ £500/pipe
YEAR 1	Marina Park	Yes	Feb-15	Jan-15	356	£178,000.00
	Orangefield Crescent	Yes	Jun-15	Jan-15	301	£150,500.00
	Gilnahirk ph1	Yes	Jun-15	Feb-15	437	£218,500.00
	Ulsterville Gardens	Yes	Jun-15	Jan-15	414	£207,000.00
	Ebor Street	Yes	Jun-15	Feb-15	428	£214,000.00
	West Wind Terrace	Yes	PC13 LPRP	PC 13	27	£13,500.00
	Victoria Gardens	Yes	PC13 LPRP	PC 13	16	£8,000.00
	Ransevyn Park	Yes	PC13 LPRP	PC 13	84	£42,000.00
	Derryvolgie Avenue	Yes	PC13 LPRP	PC 13	66	£33,000.00
	Ballycraigy Park	Yes	PC13 LPRP	PC 13	52	£26,000.00
	Victoria Court Donaghadee	Yes	PC13 LPRP	PC 13	79	£39,500.00
TOTAL					**2260**	**£1,130,000.00**
YEAR 2	Roseberry Road (ph 1)	Yes	Sep-15	Feb-15	603	£301,500.00
	Irwin Avenue	Yes	Sep-15	Mar-15	445	£222,500.00
	Morven Park (ph1)	Yes	Mar-16	Feb-15	199	£99,500.00
	Gilnahirk ph2	Yes	Mar-16	Feb-15	434	£217,000.00
	Grand Parade	Yes	Sep-15	Jan-15	412	£206,000.00
TOTAL					**2093**	**£1,046,500.00**
YEAR 3	York Park	No	Mar-16	Dec-15	301	£150,500.00
	Tates Avenue	No	Mar-16	Feb-15	1391	£695,500.00
	Cregagh Road	No	May-16	Feb-16	449	£224,500.00
TOTAL					**2141**	**£1,070,500.00**
YEAR 4	Deramore Avenue	No	Mar-16	Dec-15	684	£342,000.00
	Roseberry Road (ph 2)	No	Mar-16	Feb-15	722	£361,000.00
	Willowholme Drive	No	Mar-16	Mar-15	445	£222,500.00
	Myrtlefield Park	No	Mar-16	Jan-16	204	£102,000.00
	Cranmore Gardens	No	Mar-16	Jan-16	128	£64,000.00
TOTAL					2183	**£1,091,500.00**
YEAR 5	Bramcote Street	No	Mar-16	Mar-15	375	£187,500.00
	Beechmount Crescent	No	Mar-16	Dec-15	722	£361,000.00
	Kirkliston Park	No	Mar-16	Jan-16	419	£209,500.00
	Ravenscroft Avenue	No	Mar-16	Jan-15	493	£246,500.00
	Eastleigh Crescent	No	Mar-16	Jan-16	90	£45,000.00
	Breda Gardens	No	Mar-16	Jan-16	50	£25,000.00
TOTAL					**2149**	**£1,074,500.00**
YEAR 6	Ainsworth Street	No	Mar-16	Jan-16	444	£222,000.00
	Dunlambert Park	No	Mar-16	Mar-15	285	£142,500.00
	Haypark Avenue	No	Mar-16	Dec-15	260	£130,000.00
	Windsor Avenue	No	Mar-16	Feb-15	82	£41,000.00
	Birch Drive	No	Mar-16	Feb-15	210	£105,000.00
	Ormiston Crescent	No	Mar-16	Jan-16	151	£75,500.00
	Wandsworth Parade	No	Mar-16	Jan-16	291	£145,500.00
	Cherryvalley Park	No	Mar-16	Jan-16	335	£167,500.00
	Lynnwood Park	No	Mar-16	Jan-16	39	£19,500.00
	Schomberg Park	No	Mar-16	Jan-16	53	£26,500.00
TOTAL					**2150**	**£1,075,000.00**
				Totals	**12,976**	**£6,488,000.00**

	Prioritised Hotspot Location	Works Package Issued	Date Issued to	Water Quality Survey	Lead Comms Pipes Submitted	Cost @ £500/pipe
YEAR 7	Orpen Drive	Mar-16	No	To be Surveyed	351	£175,500.00
	Ethel Street	Mar-16	No	To be Surveyed	567	£283,500.00
	Balfour Avenue	Mar-16	No	To be Surveyed	385	£192,500.00
	Thomas Street	Mar-16	No	To be Surveyed	316	£158,000.00
	Wellington Park	Mar-16	No	To be Surveyed	115	£57,500.00
	Milfort Avenue	Mar-16	No	To be Surveyed	167	£83,500.00
	Beechland Drive	Mar-16	No	To be Surveyed	221	£110,500.00
TOTAL					**2122**	**£1,061,000.00**
YEAR 8	Castlereagh Street	Mar-16	No	To be Surveyed	99	£49,500.00
	Montgomery Road	Mar-16	No	To be Surveyed	122	£61,000.00
	Castledona Crescent	Mar-16	No	To be Surveyed	479	£239,500.00
	Portallo Street	Mar-16	No	To be Surveyed	433	£216,500.00
	Avoniel Road	Mar-16	No	To be Surveyed	126	£63,000.00
	Braeside Grove	Mar-16	No	To be Surveyed	448	£224,000.00
	Onslow Gardens	Mar-16	No	To be Surveyed	215	£107,500.00
	Ravenhill Park	Mar-16	No	To be Surveyed	109	£54,500.00
	Hillsborough Drive	Mar-16	No	To be Surveyed	62	£31,000.00
TOTAL					**2093**	**£1,046,500.00**
YEAR 9	Kent Avenue	Mar-16	No	To be Surveyed	73	£36,500.00
	Glenbank Drive	Mar-16	No	To be Surveyed	185	£92,500.00
	Glenbryn Drive	Mar-16	No	To be Surveyed	277	£138,500.00
	Joanmount Park	Mar-16	No	To be Surveyed	583	£291,500.00
	Eastleigh Drive	Mar-16	No	To be Surveyed	106	£53,000.00
	Veryan Gardens	Mar-16	No	To be Surveyed	263	£131,500.00
	Thorndale Avenue	Mar-16	No	To be Surveyed	74	£37,000.00
	Crumlin Road	Mar-16	No	To be Surveyed	177	£88,500.00
	Somerton road	Mar-16	No	To be Surveyed	93	£46,500.00
	Kelvin Parade	Mar-16	No	To be Surveyed	170	£85,000.00
TOTAL					**2001**	**£1,000,500.00**

	Prioritised Hotspot Location	Works Package Issued	Date Issued to	Water Quality Survey	Lead Comms Pipes Submitted	Cost @ £500/pipe
YEAR 10	Knockwood Park	Mar-16	No	To be Surveyed	355	£177,500.00
	Northwick Drive	Mar-16	No	To be Surveyed	818	£409,000.00
	Orangefield Avenue	Mar-16	No	To be Surveyed	654	£327,000.00
	Cyprus Avenue	Mar-16	No	To be Surveyed	95	£47,500.00
	Clonlee Drive	Mar-16	No	To be Surveyed	84	£42,000.00
TOTAL					**2006**	**£1,003,000.00**
YEAR 11	Cherryhill Avenue	Mar-16	No	To be Surveyed	346	£173,000.00
	Cabin Hill Gardens	Mar-16	No	To be Surveyed	210	£105,000.00
	Holywood Road	Mar-16	No	To be Surveyed	368	£184,000.00
	Ardcarn Way	Mar-16	No	To be Surveyed	222	£111,000.00
	Knocktern Gardens	Mar-16	No	To be Surveyed	89	£44,500.00
	Victoria Road	Mar-16	No	To be Surveyed	192	£96,000.00
	Kings Road	Mar-16	No	To be Surveyed	424	£212,000.00
	Strandburn Drive	Mar-16	No	To be Surveyed	196	£98,000.00
	Leven Park	Mar-16	No	To be Surveyed	50	£25,000.00
TOTAL					**2097**	**£1,048,500.00**
YEAR 12	Abbey Ring	Mar-16	No	To be Surveyed	535	£267,500.00
	Church Avenue	Mar-16	No	To be Surveyed	97	£48,500.00
	Clifton Road	Mar-16	No	To be Surveyed	301	£150,500.00
	Lancaster Avenue	Mar-16	No	To be Surveyed	143	£71,500.00
	Bloomfield Road	Mar-16	No	To be Surveyed	612	£306,000.00
	Newtownards Road	Mar-16	No	To be Surveyed	315	£157,500.00
TOTAL					**2003**	**£1,001,500.00**
				Totals	**12,322**	**£6,161,000.00**

DEVELOPMENT OUPUT
11. Water Meter Renewal
Final Determination: *The company shall report progress against its programme of water meter renewal, targeted to deliver a uniform rate of replacement to ensure that all revenue meters are no more than 17 years old by the end of PC15.*
PROJECT SUMMARY
NIW in accordance with the company policy on Proactive Meter Exchanges (PME) set out its PC15 programme of replacements over a 6 year period, • The data obtained from the Rapid corporate billing system indicated 29059 water meters would meet the PME criteria during the period 2015-2021. • It was envisaged that 4843 meter per year would be targeted for replacement over a 6 year period • During 15/16 NIW due to better than expected success rates decided to increase the pace of replacement and was able to exchange 6,920 meters as opposed to the planned 4843 • During 16/17 NIW was again due to better than expected success rates able to increase the pace of replacement and was able to exchange 7,399 meters as opposed to the planned 4843 • During the first 2 years of PC15 NIW has proactively exchanged 14,319 meters as opposed to the proposed 9686 • Due to the accelerated rate of replacements during 15/16 &16/17 NIW plans to scale back replacements to just under 3000 meters per year for the remainder of PC15.

KEY MILESTONES	Target	Status
1. 2015/16	4.843	6,920
2. 2016/17	9,686	14,319
3. 2017/18	14,529	
4. 2018/19	19,372	
5. 2019/20	24,215	
6. 2020/21	29,058	

- As part of its PC15 Business Plan submission, NI Water stated that the company has a policy to proactively replace customers' meters which are >17 years old and or have a recorded consumption of >8000m^3.
- NI Water is aware having completed research involving extracting and testing sample numbers of customer meters that meters have the propensity to under record consumption as they get older. Wider water industry research also supports this position with many GB companies proactively replacing their meter stock from the age of 10 up to 17+ years.
- The numbers of meters matching the NI Water criteria as extracted from the company billing system and quoted to NIAUR are detailed below.

PC15 - PME Numbers							
Due for Replacement	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	
Install Year	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	Total
Meeting Age Criteria	11,634	1,682	2,105	2,905	3,038	3,712	**23,426***
Meeting Consumption Criteria							**5,633**
Overall Total							**29,059**
Proposed Replacement Programme	4,843	4,843	4,843	4,843	4,843	4,843	

*23,426 total = 25,076 – 1,650 ongoing PME jobs between Oct14-Mar15

- Pre-empting the PC15 mid-term review and in response to the regulators T47 query NI Water has to report the following progress.
- NI Water based on the above numbers has been more proactive in its PME programme during 2015/16 than originally proposed replacing 6920 meters as reported in AIR16.
- The reason for completing more replacements is that NI Water was able to secure better contract rates following the amalgamation of two former maintenance contracts used for metering into a single and more competitive meter installation and replacement contract.
- NI Water was also conscious of the 'bow wave' of meters extracted from the corporate billing system matching the age and consumption criteria in 2015/16.
- The numbers of meters detailed above and extracted from the corporate billing system as per the PME criteria are still valid today.
- The billing system has the entire customer meter stock listed against various fields known as water statuses. Examples of these meter statuses are described in the table below.

NI Water - Corporate Billing System Water Status			
1	Combination meter-low	8	RFR – compensation supply
2	Dom sub meter	9	RFR – no billable name/address
3	Domestic supplied	10	RFR – shared supply
4	DRD supply	11	RFR - unable to locate
5	Free supply	12	Sub meter
6	Not supplied	**13**	**Supplied**
7	Retain For Review (RFR)	14	Trade Effluent

- NI Water has to date focused its PME programme on the water status numbers contained within the supplied category. This status covers 72% of the entire meter stock meeting the age and or consumption criteria.
- During 2015/16 NI Water replaced 6920 meters, this equates to 59% of the meters meeting the age criteria for that year. During 2016/17 NI Water issued circa 8200

replacement jobs to the metering contractor, with a success rate of 90% this has resulted in the replacement of 7399 meters. This combined with the previous year will result in 14319 meter exchanges equating to 50% of the entire numbers anticipated over the course of PC15.

- Being able to better the original anticipated profile has enabled NIW to address the potential under recording of consumption due to the age of the meter and thus improve the accuracy of its measured consumption.
- NI Water will continue to further review its meter data associated with the other water status categories. NI Water will where appropriate issue meter exchange batches to the metering contractor through the remainder of PC15.
- NI Water following legislative changes in December 2016 removing the Art 81 obligation to fit meters on newly connected domestic premises, has recently reviewed its PME programme and the impact this will have on older meters **re-classified to domestic status**. As such, NI Water does not believe it prudent to continue proactively replacing customer meters outside of the billing category described above as 'Supplied'. The impact of this will be to significantly reduce the projected number of meters initially identified as meeting the PME criteria of age and or consumption for the remainder of PC15.

Anticipated installation rates are summarised below:

Year	15/16	16/17	17/18	18/19	19/20	20/21	Total
Meters replaced	6,920						15,350
Estimated meters to be replaced		7,399	400	7	4	620	

DEVELOPMENT OUPUT
12. Targeting sewerage 'hotspots'
Final Determination: *The company shall report on its plans to target sewerage hot spots of blockage and collapse and the development of its sewerage intervention prioritisation to incorporate the outcome of PC15 consumer engagement. The company shall provide updates on the implementation of the prioritisation annually through PC15.*
Additional Details:
The Sewerage Hotspot tool is now BAU activity.
PROJECT SUMMARY
• **Hot-Spots of Blockages** – Monthly reports generated automatically to inform Asset Performance and CSDD. – Joint AP/CSDD liaison to determine and agree further root cause investigation needs. • **Sewer Collapses** – Sewer collapses are repaired as and when they occur; either through CSDD intervention or through AP for EP delivery of remedial for larger scale repair needs. • **Sewer Infrastructure Investment Model (SIIM)** is operating as a BAU tool to identify and prioritise sewer Structural Grade 4s & 5s sewer lengths for consideration for rehabilitation as one of the Capital Maintenance Planning tools. • The SIIM is refreshed annually using updated corporate datasets (e.g. collapses, blockage, out of sewer flooding, pollution, and customer contacts etc.). Annual updates are used to inform the next year's rehabilitation investment programme. • The rehabilitation programme is risk-based and focused on individual sewer lengths classified as '*High Risk*' and '*High Consequence*'. • Asset Performance undertakes a targeted CCTV programme and then liaises with CSDD to confirm sewer condition and agree the extent of rehabilitation required prior programme submission to EP. • From April '17, the rehabilitation programme will be forwarded to EP on a quarterly basis (as opposed to annually). This will allow improved delivery programming. • Methodology reviewed periodically as BAU to maintain best practice. Next review scheduled to commence in June '18.

KEY MILESTONES	Target	Status
1. Sewer blockage 'Hot-Spot' Reporting	Monthly	BAU
2. Review SIIM methodology.	June '18	BAU

Activity completed to date and its outcome

The Hotspot tool is completed and working well. On a monthly basis, a report is run for each of the 4 areas giving the top 10 problematic sewers within each area. This enables CSDD to prioritise their sewer investigations budget. Asset Performance, in conjunction with CSDD, meet on a regular (monthly) basis to discuss the problematic sewers, which have been highlighted by the hot spot tool to identify whether further work is required.

Planned next steps for delivery

The next steps for delivery include determining whether richer data sets and information are required in order to generate more accurate reports. The purpose being to further reduce the number of blockages across the various catchments in the Province.

DEVELOPMENT OUPUT
13. Polluted Storm Water Overflows
Final Determination: *The company shall report progress on the investigation and remediation of storm-water overflows including enforcement action taken by various authorities and any remediation action undertaken.*
Additional Details:
NIEA identified 47 priority catchments where there appear to be issues with misconnections. To date NI Water has investigated 24 and has been able to resolve a number of pollution issues through "quick wins". However, it has not always been possible to close out issues, as there is a gap in the legal powers available to NI Water to remedy misconnections.
PROJECT SUMMARY
• A Working Group has been established comprising DfI's Water and Drainage Policy Division (WDPD), NI Water and NIEA to agree a new policy for dealing with misconnections. To date, 4 meeting have taken place. • WDPD, NIEA and NI Water to produce a shortened version of the good practice document titled "Investigation and rectification of drainage misconnections", condensing it to reflect present agreed procedures for dealing with misconnections. Once agreed, document to be shared with UR for comment. Document is currently in daft format for discussion and sign-off before submission to UR. • WDPD to liaise with DfI Planning Group to establish how best to promote / educate on the problems associated with misconnections. • Continued development and refinement by NI Water and NIEA has strengthened the investigatory process and working practices. • Where practicable NI Water has dealt with misconnections on a case-by-case basis. However, the vast majority of misconnections are related to washing machine connections. The Working Group is reviewing policy and legal aspects of correcting misconnections.

KEY MILESTONES	Target	Status
1. Joint Liaison Meetings	Ongoing	
2. Prepare draft good practice document	Nov17	
3. Agree and implement good practice document	Nov17	

Activity completed to date and its outcome

Stage 1 of this project has been completed which was the investigation of 24 catchments using CCTV techniques, dye testing and engaging with the public. Following on from these activities, NI Water has requested advice from its Shareholder on the next step to take on corrective actions.

The present position on Polluted Storm Water Overflows is detailed below:

- 24 Catchments out of 47 catchments highlighted with NIEA have been surveyed regarding pollution of nearby rivers.
- The surveys highlight that most of the pollution is from private connections e.g. washing machines located in garages that are connected to the roof gully, which in turn discharges into a storm water sewer.
- A meeting took place in September 2016 between NIEA, NI Water and DfI with the purpose of developing a policy to address misconnections on private properties. At this meeting, NIEA highlighted that they had identified quick wins concerning some of the misconnections. However, following further investigation by NI Water it was determined that these quick wins were not viable as they involved diverting storm water into foul sewers, which did not have the necessary hydraulic capacity.
- The Working Group continue to meet to establish how best to address private connections.

- Until a policy is developed, NI Water has not conducted any further catchment studies. This decision was made with the agreement of NIEA (2015),
- Misconnections located by NI Water on the public highway are being addressed i.e. they are being redirected to foul sewers.
- NI Water is continuing to investigate and address pollution of storm water overflows where the misconnection is on public property.

Planned next steps for delivery

The next step for delivery entails a request for clarification from DfI Water Policy Unit on the way forward: regarding potential enforcement actions.

DEVELOPMENT OUPUT
14. Storm water separation
Final Determination: *The company shall develop a plan for investing the funding allocated for storm-water separation by September 2015 which sets out the target projects and the benefits they deliver. The company shall assess the scope for storm-water separation and assess benefits it could deliver to support further investment.*
Additional Details:
This is now Business As Usual
PROJECT SUMMARY
• Stormwater separation is an option considered in all new project appraisals. • A plan has been developed using SudStudio methodology to prioritise storm separation across the Province. • The project considered a phased approach as follows: – Phase 1 – considered schools but this proved to be undeliverable due to issues with Education Authority acceptance and buy-in. – Phase 2 – consisted of major industrial premises and terraced housing. Phase 2 has been forwarded to EP to develop detailed solutions – i.e. A0 (KI605) issued to EP in December '16 for delivery of Phase 2 work. Final output costs will only be known after detailed design has been completed. – Desktop assessment of Phase 2 has the potential area removal identified as circa 1,077,150m^2.

KEY MILESTONES	Target	Status
1. PC15 Plan has been developed		Complete
2. Phase 2 schemes identified to EP for detailed design and delivery	Dec '16	Complete
3. Delivery scheduled by EP	Mar '18	On target
4. Provide input to PC21 asset management plan	Sep-Dec 2019	On target

Storm water separation

During PC15 NI Water has planned to remove 19 hectares of impermeable area develop by implementing a variety of projects which also inform the business of the cost effectiveness of storm water separation in a range of situations and catchments. For example:

- where separate systems have been merged when they join the old combined network
- industrial areas and roofs
- areas of terraced housing
- areas of semi-detached housing
- roads.

NI Water's primary aim is to identify the priority locations across Northern Ireland where the retrofitting of storm water separation / SuDS technologies would remove significant volumes of storm water from the combined sewer system. To facilitate this NI Water has employed an innovative tool: SUDS Studio™,

The SUDS Studio™ tool works by using GIS data to identify sources of runoff (for example roof, roads, carparks, hardstandings, etc.), sinks (locations where SuDS solutions can be installed or nearby watercourses), and pathways which connect the two. The tool has been designed to incorporate a range of complex relationships that are used to determine what

SuDS are considered feasible on any given site, and those that are not. SuDS Studio™ assesses the best solution for each source and site, and outputs its results as GIS layers containing tables that can quickly and easily be summarised in reports and easy to understand figures.

The basis of the Suds Studio™ analysis in Northern Ireland is the OSNI Vector mapping dataset. However, NI Water wishes to emphasise that SuDS Studio™ has been developed based on OS Master Map data that is significantly more detailed and functional than OSNI Vector mapping. A significant amount of pre-processing of the data has therefore been required to supplement the OSNI Vector maps in an attempt to replicate the quality of information contained in OS Master Map. It is our understanding that there is a current project within OSNI to develop a polygon based mapping dataset that is similar to OS Master Map which when finished will enhance the output derived from SuDS Studio in Northern Ireland in the future.

However, based on the current situation significant pre-processing is required due to the GIS data available in Northern Ireland (plus time to acquire and purchase additional data sets) and has extended the time taken to conduct the SUDS Studio™ analyses. This in turn has resulted in the slower identification of storm water / SuDs opportunities in Northern Ireland with which to develop NI Water's Storm Water Separation Programme of work.

Since its launch at the start of PC15, a fundamental goal of NI Water's Storm Water Separation Programme has been to develop a robust approach for identifying priority locations across Northern Ireland. This is essential for the successful retrofitting of SuDS technologies / storm water separation infrastructure for the removal of significant volumes of storm water from the combined sewer system. Time taken in developing the system is considered well spent by NI Water and will drive a successful programme going forwards.

During 2015 and 2016, NI Water's consultant has adapted SUDS Studio™ into a bespoke tool for identifying large surface areas in public ownership across Northern Ireland with potential for storm water separation / SuDS Technologies. This resulted in the identification of a large number of schools as potential pilot project sites with high estimated project costs and unfortunately didn't yield the range of situations and catchments desired by NI Water. The four schools short-listed for separation and the recommended solutions summarised from the consultant report are presented below:

- Campbell College: SuDS Studio recommends bioretention, swales and the disconnection of downpipes. Recommendations are likely to be delivered entirely within the existing Campbell College boundary. Further work required to investigate ground conditions, quantification of flows within SuDS features, quantification of benefits to the sewer system (including DG5 impacts), design development to determine footprint and landtake, costings.
- St Louise's: SuDS Studio™ recommends bioretention and potential green roofs / disconnection of downpipes. Recommendations are likely to be delivered entirely within the existing St Louise's boundary. Further work would require investigation into ground conditions, quantification of flows within SuDS features, quantification of benefits to the sewer system (including DG5 impacts), design development to determine footprint and landtake, costings. It is also to be noted about this site that it is adjacent to an extensive area of wetland (Bog Meadows) managed by the Ulster Wildlife Trust.

- Ballycastle, SuDS Studio™ recommends bioretention, potential green roofs / disconnection, of downpipes and swales. Recommendations are likely to be delivered entirely within the existing Ballycastle High School boundary. Further work is required to investigate ground conditions, quantification of flows within SuDS features, quantification of benefits to the sewer system (including DG5 impacts), design development to determine footprint and landtake, costings. Other considerations include the existing infrastructure in place on this site in that much of the system is already separately drained with only the ultimate connection point combined. As this is already a piped system consideration should be given to continuing the piped network within Moyle Road to a suitable discharge point such as an existing storm sewer or RA culvert. Consideration will need to be given to the impact of this flow on the discharge location. Buildability constraints should be considered when determining any extension to the outfall pipeline route corridor
- Dromore, SuDS Studio™ does not recommend any feasible option in this instance due to limitations with the input data. In this instance therefore, engineering judgement has recommended that Disconnection of Downpipes be considered. Recommendations are likely to be delivered entirely within the existing Dromore Central Primary School boundary. Further work is required to investigate ground conditions, quantification of flows within SuDS features, quantification of benefits to the sewer system (including DG5 impacts), design development to determine footprint and landtake, costings.

It is important to note that NI Water has already encountered significant stakeholder issues, notably with the Education Board, regarding the safety of SuDs (often used to enable storm water separation) which are yet to be resolved. This issue has been ongoing since the start of 2016 and is related to a specific scheme currently being delivered by NI Water at Clandeboye School, Green Road, Conlig. NI Water is working closely with the Water and Drainage Policy Division of DfI regarding engagement with the Education Board and their legal representatives.

Subsequently NI Water initiated Phase 2 of planning NI Water's Storm Water Separation Programme with the SUDS Studio™ tool. The tool was further modified and the initial SUDS Studio™ run identified a broader range of potential storm water separation opportunities to address the bias, which resulted in the identification of a large number of schools in Phase 1:

- 32 high density housing sites
- 61 Industrial estates and
- 28 potential quick win sites

Through the short listing process this was refined down to:

- 14 high density housing sites,
- 14 industrial estates and
- 6 potential quick win sites.

These sites were then packaged into geographically similar study areas and progressed for ground truthing connectivity checks.

Following on from the ground truthing exercise the sites which were assessed as suitable for further consideration were modelled with Infoworks to quantify the benefit that might be

achieved from storm water separation / SuDS retrofit. This has allowed us to model and assess the following sites (Table 1) which are now being considered as pilot studies from Phase 2. In total, the *maximum potential* area that could be removed as a result of the Phase 2 assessment is 1,077,210 m^2.

The Phase 2 opportunities mainly originate in High Density Housing areas and only one Industrial estate. Industrial estates have proven to be, on the whole, already separate systems. It should be noted that it is unlikely that the 100% separation figure modelled (total area = 1,077,210 m^2) could be achieved in reality. Therefore, these figures should be considered as an initial over estimate, which will reduce during the feasibility and implementation phases.

Furthermore, stakeholder issues will be key in determining the viability, likelihood of success and speed at which solutions can be realised. There are a number of other industrial estates and quick win sites that are also suitable for further consideration (having been ground truthed) and these will be brought forward to NI Water in a Report. The sites and potential impermeable area removal (m^2) have been presented in Table 1. It should be noted that consents are yet to be negotiated with a key stakeholder, Rivers Agency, where storm water is being separated and directed into a river or culvert.

Table 1: Phase 2 Sites identified with potential for storm water separation and SUDS solutions, including the associated potential maximum area removal values (m^2).

Location	Potential Area Removal m^2	Potential Percentage Removal Options	
		Storm Water Separation	SuDS Solutions
Alliance Avenue / Brompton Park Area, Belfast	121,000	100%	56%
Lincoln Court, Derry	76,200	100%	60%
Carnhill Area, Derry	95,290	100%	55%
Norglen Parade, Belfast	110,160	100%	64%
Springfield Rd / Cavendish Road Area, Belfast	124,660	100%	49%
St James Road, Belfast	50,860	100%	45%
Tates Avenue / Donegal Rd / Dunluce Avenue Area, Belfast	461,980	100%	52%
Maydown Industrial Estate, Derry	37,060	100%	39%

Significant delays in Phase 2 have been experienced in relation to the ground truthing connectivity checks being undertaken by a CCTV contractor. In addition, there were initial issues surrounding access to Stormont Estate, however, these were subsequently resolved with the assistance of Water and Drainage Policy Division DfI.

As part of Phase 1 Asset Management also engaged within the NI Water Capital Works Programme requesting that stormwater separation should be considered as part of the options analysis regarding drainage solutions i.e. a business as usual process. This has yielded four projects in 2015/16 and the impermeable area removal has been presented in Table 2.

Table 2 NI Water Capital Works Programme: storm water separation projects delivered in 2016/17 and impermeable area removal (m2) values.

Sub Programme	Scheme	Impermeable Area Removal m^2
24	PC15 Sewer Rehabilitation Unplanned	39
24	Olympia Leisure Centre Windsor Park Belfast	34,500
24	8-20 Sloans Street, Dungannon	16,460
24	Ben Crom Place Kilkeel	3,865
	Total Impermeable Area Removed, m^2	54,864

NI Water is endeavouring to move the Storm Water Separation Programme forward and feasibility studies for the sites identified in Phase 2 have now commenced. Once completed NI Water will be in a position to provide a more detailed programme of work which will be complemented by other NI Water Capital Works schemes containing storm water separation that arise during PC15.

DEVELOPMENT OUPUT
15. Strategic drainage study
Final Determination: *The company shall report progress on its strategic drainage study programme to complete a business case for investment to resolve strategic drainage issues by March 2020.*
Additional Details:
This work is undertaken as Business As Usual
PROJECT SUMMARY
• The PC15 prioritised programme of Drainage Area Studies has been agreed between NI Water and NIEA. (See attached Excel Spreadsheet). A copy was provided to the UR in January 2017. DAP Model Programme for PC15. • Newry DAS awarded to consultant. • Belfast DAS awarded to consultant.

KEY MILESTONES	Target	Status
1. DAS Prioritisation Programme Agreed with NIEA	Nov '16	Complete
2. Modelling and "Needs & Options" work to be used to inform PC21 asset management plan.	Sep-Dec 2019	On target

Activity completed to date and its outcome

Strategic Drainage Area Studies are under way with agreement of NIEA on the catchments to be taken forward. At present, NI Water has fourteen MBV and N&Os underway to meet the required outputs. Expenditure to date is in the region of £650k. NI Water is also involved in the Living With Water Programme (LWWP). The LWWP requires the completion of an integrated catchment, hydrodynamic water quality model for Belfast Lough and it seems that this will also require the upgrade / development of several MBVs to provide nodal inputs concerning sewer overflows. The estimate for the overall Belfast DAP is £550k.

NI Water has developed a joint prioritisation list of drainage area studies with NIEA. A data-driven approach has been employed to facilitate the integration of both network and wastewater treatment work needs to enable the whole catchments to be addressed.

Planned next steps for delivery

The next step involves completing innovative Risk Based Needs and Options studies for the agreed catchments to enable a programme of work to be taken into the next PC Period i.e. PC21. This is essential as the programme identifies NI Water projects required to address Quality drivers and Base Maintenance issues. Note that under the risk-based approach NI Water is developing solutions to address New Development in catchments with hydraulic capacity issues/risks.

DEVELOPMENT OUPUT
16. Sewer flooding report
Final Determination: *The company shall provide an annual report on property flooding alleviation and mitigation providing an update on the DG5 flooding register, progress on feasibility studies to identify solutions and progress in delivery of investment and delivery of outputs.*
Additional Details:
This is Business As Usual through the DG5 panel
PROJECT SUMMARY
• Properties added / removed from DG5 registers reported annually through the AIR submission. • Target of 14 removals for 2015/16 & 2016/17 achieved. • Update on progress on feasibility studies to identify solutions. EP have currently 5 feasibility projects ongoing; – KI 529 - One remaining property feasibility assessment outstanding – Lisnevenagh Rd. – KI 531 - Two No feasibility reports outstanding: Cathedral View, Downpatrick & Tullagh Rd, Cookstown. – KI 564 - Feasibility is ongoing, estimated submission date to NIW, August 2017. – KI 515 - One remaining property feasibility assessment outstanding - The Beeches, Portadown. – KI 509 - One remaining property feasibility assessment outstanding - Brough Road, Magherafelt. • DG5 properties resulting from the live feasibility projects have been progressed for delivery within the PC15 DG5 delivery programme. • Target for 17/18 projected for 6 removals.

KEY MILESTONES	Target	Status
1. DG5 Removals 2015/16 & 2016/17.	14	On Target

Activity completed to date and its outcome

The company supports the implementation of the Home Owner Flood Protection Scheme being delivered by NI Executive through the Rivers Agency. NI Water contributes to the Home Owner Flood Protection Scheme process by assessing whether homeowners are on NI Water's DG5 Register and whether there is a capital scheme that will alleviate the flooding over the next 5 years. NI Water retains a register of these enquiries and they are discussed at monthly DG5 Panel meetings. The DG5 Register is updated monthly with additions and removals as approved by the DG5 Panel. DG5 Register movements are recorded and provided in the Annual Information Return by NI Water. The AIR17 summary of register movements is provided in the attached document for the period 1st April 2016 to 31st March 2017.

The solutions to address DG5 Internal Flooding properties are being developed and delivered and the investment is commensurate with the PC15 funding provided.

Planned next steps for delivery

The next step involves amassing a programme of fully appraised, detailed solutions thereby enabling NI Water to implement the removal of properties from the DG5 register as set out in the PC15 Business Plan. This will facilitate the meeting of the PC15 regulatory requirements for DG5 internal flooding property removals. Furthermore, this

approach will enable NI Water to develop the detailed DG5 programme, populated with accurate costings and numbers of properties to be addressed in the PC21 Business Plan.

DEVELOPMENT OUPUT		
17. Sustainable Urban Drainage Systems (SUDS)		
Final Determination: *The company shall record information on SUDS applications and report annually on:* *- The number of applications received; and* *- The number of schemes adopted.* *The company shall maintain a register of its decisions on SUDs applications, highlighting the reasons any application was refused.*		
PROJECT SUMMARY		
NI Water does not receive stand-alone SuDS applications. However, NI Water receives applications for future adoption of development sewers, some of which may have an integral SuDS system. • The reporting mechanism records the number of applications received and authorised for future adoption of development sewers where SuDS is an integral part of the application. • The number of development sewers adopted with a SuDS element. • Development sewers with SuDS are not refused, rather encouraged, so this value will invariably be 'nil'.		
KEY MILESTONES	Target	Status
1. Report on SUDs applications in AIR	Annually	BAU

Activity completed to date and its outcome

NI Water does not have SUDS approval forms; instead, Art.161 application forms 'Application for Agreement to Connect Sewers in a New Development' are used. For AIR17 returns, NI Water have recorded the number of Art. 161's approved which incorporate SUDS. Sewer adoption forms have been updated to capture the number of adopted SUDS systems.

Data for 2016/17

17 Housing sites adopted, incorporating SUDS utilising hyrobrake/vortex flow control.
86 Housing sites approved, incorporating SUDS utilising hyrobrake/vortex flow control.

DEVELOPMENT OUPUT

18. Implementation of the PPC requirements for Odour Management

Final Determination:
The company shall develop a plan for the implementation of PPC requirements for Odour Management by 31 March 2015, which shall be prioritised and agreed with NIEA. The company shall report progress against the delivery of this plan.

GOVERNANCE

Directorate	SRO	Project Lead	Approving Authority
Asset Delivery	Paul Harper	Angela Halpenny	EC

Additional Details:

N/A

PROJECT SUMMARY

NI Water holds 29 Pollution Prevention Control (PPC) permits for WwTW sludge centres for thickening or dewatering wastewater sludges. The permits require odour modelling to be undertaken to assess the impact from the facility on the surrounding sensitive receptors. Recognising the financial impact and resources required to undertake the necessary modelling, a prioritised list was initially agreed with NIEA in June 2015.

NIEA ranked the 29 PPC sites into the following categories:
- Priority 1 (4 sites),
- Priority 2 (8 sites),
- Priority 3 (12 sites) and
- odour modelling not required (5 sites).

The modelling is divided into 2 phases.

The first phase is a library data based, screening exercise. If this exercise identifies an impact on surrounding sensitive receptors, the site will progress to the second phase, which involves collection of site-specific olfactometry data.

Whilst NIEA asked for odour modelling of Priority 1 sites to be completed in 2015/16, delays were incurred due to the time of year for undertaking the site based odour survey during the summer months, when emissions are likely to be at their highest (May/June to September). The odour modelling is now complete for all Priority 1 sites.

KEY MILESTONES	Target	Status
1. Develop a plan for the implementation of PPC requirements for Odour Management	31 Mar 15	Complete
2. Completion of 2nd Phase odour models for priority 1 sites: Carrickfergus, New Holland, Dungannon and Whitehouse.	31 Dec 16	Complete
3. 2nd Phase odour model for the upgraded Newcastle WwTW	31 Mar 17	Complete
4. 1st Phase modelling based on library data for Priority 2 and 3 sites	31 Mar 18	On Target
5. Develop list of sites requiring 2nd Phase modelling	31 Mar 18	On Target
6. Undertake 2nd Phase modelling for sites identified in No. 4 above, selecting the priority 2 sites first, followed by the priority 3 sites	31 Mar 19	On Target
7. Using 2nd phase modelling develop and deliver a programme of work required to meet PPC odour requirements	31 Mar 21	On Target

ANNUAL INFORMATION RETURN - TABLE 48 Social and Environmental Guidance for Water and Sewerage Services (2015-21)

Drinking Water Quality

Priority	Drinking Water Directive	Update on Delivery (June 2017)	AIR Ref
WQ1	Maintain existing water assets and infrastructure and complete any upgrades needed to sustain overall compliance levels.	NI Water maintain assets as a Business as Usual (BAU) action within our base maintenance programme. The total base maintenance funding being invested has been maintained in line with the PC15 FD to ensure customer service is maintained. This investment includes replacements and repairs to sustain water compliance levels. Upgrades to achieve new compliance standards are prioritised from the 'Enhancement' investment programmes and nominated within the PC15 final determination. This funding envelope has been reduced from the PC15 FD due to PE cuts and is delaying investment at sites including Derg WTW where Pesticides are now requiring an additional treatment process which was not identified at the time of the PC15 plan.	AIR Table 11 and Table 40a
WQ2	Complete any water infrastructure and treatment upgrades necessary to address enforcement notices and other statutory obligations from the Water Supply (Water Quality) Regulations (NI) 2007 (as amended).	Water infrastructure investment (watermains rehab) is prioritised using our WIIM progress which includes for a range of issues including water quality. Any enforcement notices relating to watermains infra should they arise will be accommodated as must do investments within the watermains rehab programme which is a blend of Base Maintenance and Enhancement investments. PC15 has to date completed the GAC installations at Dorisland and Killyhelvin WTW's which achieved beneficial use in PC13. The PC15 programme also includes for investment at Derg WTW to fit out existing filters and ensure the chemical arrangements are available to treat the water from the River Strule intake. In addition a PEO ref MCPA has added a further project not funded within the PC15 FD nominated outputs. It is planned to progress this project in PC15 as an agreed 'undefined' output providing funding is guaranteed.	AIR Table 11 and Table 40a
WQ3	Identify and program any infrastructure and treatment upgrades necessary to meet new or emerging drinking water quality issues or legislative changes (e.g. Radon).	NI Water will continue to respond to emerging risk identified in the Drinking Water Safety plans and to respond to issued raised by the Drinking Water Inspectorate in its consideration of provisional enforcement orders or other enforcement action. Any resultant outputs will be agreed with stakeholders via change protocol to prioritise investment not currently funded in PC15 FD.	
Priority	**Water Fittings Regulations**	**Update on Delivery**	**AIR Ref**
WQ4	Effectively monitor and regulate compliance with the Water Supply (Water Fittings) Regulations (Northern Ireland) 2009 and manage the risk of contamination or waste of public water supplies through defective water fittings.	NI Water monitor and regulate compliance with Water supply Regs as a BAU item. Information on the companies obligations and powers, guidance to householders and notification forms are available on the companies website. The company supports the national schemes for licensed or approved plumbers.	
Priority	**Drinking Water Safety Plans and Drinking Water Protected Areas**	**Update on Delivery**	**AIR Ref**
WQ5	Continue raw water monitoring programme at abstraction sites to manage drinking water quality risks and work with NIEA to designate Drinking Water Protected Areas to help prevent future deterioration of drinking water sources in line with WFD principles.	Raw water monitoring is in place and ongoing. Sampling frequencies are reviewed in line with regulatory requirements and on risk assessment. The is managed as BAU. DWPAs have been assigned by NIEA for our drinking water catchments in line with WFD principles. NI Water worked with NIEA during this process.	AIR Table 9 Section B 6
WQ6	Through the ongoing review of Drinking Water Safety Plans (DWSPs), develop and implement a prioritised programme of mitigation measures to build resilience against contamination risk for all aspects of the water supply chain (from catchment through to tap) to protect public health.	As BAU we implement a prioritised investment programme to manage drinking water quality risks informed by DWSPs. This is a Core Business activity.	
Priority	**Managing Raw Water Quality Risks**	**Update on Delivery**	**AIR Ref**
WQ7	Continue rolling out a prioritised SCAMP NI programme across all drinking water catchments to reduce raw water contaminants through interactive stakeholder working to improve or prevent deterioration of abstracted drinking water quality (e.g. natural organic matter, pesticides) and provide for more cost-effective treatment solutions in the future.	Catchment Management Plans being developed by NI Water for all drinking water catchments. Catchment Management Plans will be completed for all live catchments in the PC15 period. Year 1 & 2 targets delivered. Continued roll out of the WCP and work with organisations such as Rivers Trust. SCAMP NI and the work with NGOs and the WCP is progressing well. In addition NI Water have secured Interreg VA funding for the Source to Tap project, aimed at improving border catchments.	AIR Table 9 and 47
WQ8	Implement the recommendation of the Inter-departmental Group on Wildfires to introduce Bye-laws on NI Water's land and work with the proposed Strategic Wildfire Forum and other stakeholders to manage the risk of wildfires within its catchments (and the risks to raw water quality).	Participation with the Inter-departmental Group on Wildfires is ongoing and implementation of recommendations to manage the risk of wildfires within catchments are being carried out on an annual basis as agreed at the group.	AIR table 47
Priority	**Managing Quality Risks from the Distribution System**	**Update on Delivery**	**AIR Ref**
WQ9	Continue a maintenance programme to ensure all service reservoirs are cleaned and checked for integrity on a regular basis. The company should also ensure that for the protection of human health microbiological quality is not compromised; residual disinfection is maintained throughout the distribution system, and disinfection by-products are kept to a minimum.	NI Water have a rolling programme of Potable water storage structures cleaning and inspection as a BAU item. The inspection programme informs the Base Maintenance investment at Potable Water storage structures which is progressing as per PC15 FD plans. All Water Quality parameters are monitored and managed within the water network as a BAU item	AIR Table 11 line 19
WQ10	Work with DRD, DWI and stakeholders through the PC15 planning process to develop and agree a PC15 investment programme and targets to address iron exceedances & drinking water quality complaints, in particular colour, taste & odour.	This action is complete. Stakeholder engagement took place during the development of the PC15 plan	
Priority	**Managing the Quality Risks from Lead Pipes**	**Update on Delivery**	**AIR Ref**
WQ11	Continue implementing its strategic lead policy and lead pipe replacement programme focused on improving compliance with EU Lead standard (10µg/l).	NI Water continues to invest in lead 'communication pipe' (NI Water owned pipe, excluding private customer pipe) replacement on a prioritised basis within the funding constraints of PC15. The prioritisation is completed on a risk based approach to target the investment.	AIR Table 11 Section B 8a-9
WQ12	Work with DRD, DWI and stakeholders to develop and implement a strategic risk based approach for addressing lead compliance issues associated with private supply pipes and domestic distribution systems	NI Water have completed a pilot replacing both private and public elements of lead service pipes. A report is being completed for sharing with stakeholders to take this action forward.	

Drinking Water Supply			
Priority	**Water Framework Directive**	**Update on Delivery**	**AIR Ref**
WS1	Develop, agree and implement water abstraction monitoring and management plans with NIEA.	Ongoing work with NIEA AIL team to review abstraction licences. Managed as BAU.	
WS2	Implement any drinking water resource-related measures set out in the Executive's River Basin Management Plans.	Ongoing work with NIEA. Member of the WFD Strategic Planning and Resources Group (SPAR)	
Priority	**Water Resource Management (& Drought) Plan**	**Update on Delivery**	**AIR Ref**
WS3	Prepare a revised Water Resource Management Plan (WRMP) to identify the long-term water resource management and security of supply investment needs. The WRMP should incorporate drought planning requirements, identify adaption measures in response to climate change predictions and take account of the review of water abstraction and impoundment licences. DRD will provide Guidance on this to NI Water.	NI Water have completed a draft Water Resource and Supply Resilience Project which includes for a Water Resource Management Plan, Strategic Drought Plan and a Critical Period Plan, in accordance with the guidance provided by DRD. The plan will proceed to consultation, when a minister is appointed, with the final plan informing investment in the final years of PC15 and PC21.	AIR Table 10 Section C & AIR Table 47
WS4	Develop and implement a water supply investment programme to ensure long-term security of supply (informed by revised WRMP).	This is included with WS3 above.	AIR Table 44 Section C
Priority	**Water Leakage Detection & Reduction**	**Update on Delivery**	**AIR Ref**
WS5	Continue to focus on leakage detection and reduction with the aim of achieving and maintaining the Sustainable Economic Level of Leakage18 (SELL), and driving below this if recommended in the 2017 WRMP.	The recorded leakage level of 163.43Ml/day at March 2017 was slightly above the target level of 161.00 Ml/day for 2016/17. An action plan has already been implemented to address this variance pending availability of Capital funding in 2017/18. The 2017 WRMP does not recommend going below the current SELL	AIR Table 10 and Table 44 lines 31 33
WS6	Work with DRD and stakeholders to develop and implement policy on reducing private supply pipe leakage (e.g. in conjunction with lead supply replacement).	NI Water have limited powers to repair private supply pipe leakage. If a leak is identified a waste notice is issued which provides the customer a period of c4weeks to complete a repair. The vast majority of repairs are carried out within this period and reducing the time period would have limited benefit. A draft report following the pilot lead replacement project has been completed and is currently being reviewed by NI Water Governance mechanisms. As suggested in last year's report the initial outputs suggest there is limited benefit in replacing private communications pipe unless all internal lead within a property is removed. As soon as the report is approved it will be forwarded to DfI for further consideration.	
Priority	**Managing Water Consumption**	**Update on Delivery**	**AIR Ref**
WS7	Continue with a programme to install meters for non-domestic water and sewerage customers	NI Water was until December 2017 obligated to fit water meters at all newly connected premises under Article 81 of the Water and Sewerage Services Order (2006). In December 2016 the Minister made regulations removing the part of this obligation relating to Domestic premises. As such NI Water will limit the installation of water meters to non-domestic premises going forward.	AIR Table 8 Section B
WS8	Prepare and implement a Water Demand Management Strategy (WDMS) focussed on moving towards the proposed water strategy's long-term target of 130 l/h/day.	This is a long term water strategy action being led by DfI. NI Water will support the development of this strategy.	
WS9	Work with DRD and other stakeholders to develop policies in respect of water efficiency measures in homes and businesses. This includes investigating opportunities to work with other government departments, utility providers or NGOs to find mutually beneficial projects in which water efficiency can be highlighted or implemented (e.g. water efficiency and lower energy bills)	An initial meeting held with DfI and other associated stakeholders on the 23rd May 2017 to discuss this measure in relation to the LTWS. Following this discussion it was agreed that NI Water would highlight the current Education campaigns to assess if there were further opportunities. In addition the work on Demand Management options carried out as part of the 2017 WR&SRP to be forwarded to DfI for further discussion.	

Environmental Protection & Improvement			
Priority	**Urban Waste Water Treatment Directive (UWWTD)**	**Update on Delivery**	**AIR Ref**
WW1	Continue improving overall levels of compliance with Water Order Consents(including flow compliance from 2015), the PPC Regulations and the CSO spill requirements of the UWWTD, WFD (including Priority Substances &SWD), MSFD & BWD.	The PC15 plan and FD set targets to continue improving overall levels of compliance. Despite public expenditure cuts within 15/16 and 16/17, which have impacted on NI Water ability to upgrade WWTW's as per the PC15 plan, with some projects being delayed, compliance has been maintained. Actual compliance by WwTW at calendar year end for 2015 and 2016 was 92.80% and 93.62%.	AIR Table 16 Section D, E and F
Priority	**Urgent Waste Water Priorities**	**Update on Delivery**	**AIR Ref**
WW2	Develop and deliver a prioritised investment programme on wastewater treatment facilities, pumping stations and sewerage systems to meet:	The PC15 plan was developed with stakeholder engagement and all WWTW enhancement projects have been prioritised in conjunction with NIEA. The PC15 plan was constrained within the funding limits set for the plan and this has resulted in a significant number of WWTW's not receiving investment during PC15. The additional PE cuts in 15/16 and 16/17 are further reducing NI Water's ability to deliver investment at WWTW's and as a result a number of new housing developments are not receiving planning approval as the receiving WWTW has no headroom capacity. The extent of this impact is detailed in the mid term review baseline document compared to the latest plan, illustrating the number of WWTW's where potential investment could have taken place in PC15.	AIR Table 16 Section F and Table 40a
WW2a	- immediate development pressures (& address overloaded works) and compliance with Water Order Consents (WOCs),		AIR Table 16 Section F and Table 40a
WW2b	- flow monitoring requirements (in support of the introduction of flow compliance from 2015); and		AIR Table 16 Section F and Table 40a
WW2c	- any outstanding spill monitoring requirements needed for compliance with the UWWTD, SWD & BWD.		AIR Table 16 Section F and Table 40a
WW2d	And deliver the highest priority schemes during PC15 within the funding constraints.		AIR Table 16 Section F and Table 40a
Priority	**Planning & Modelling**	**Update on Delivery**	**AIR Ref**
WW3	Work with DRD, NIEA and other statutory partners in response to the Committee for Regional Development's Inquiry into Unadopted Roads and commence a prioritised investment programme to address unsatisfactory private sewerage infrastructure and treatment facilities	This action has not progressed as no funding was included with the PC15 business plan or FD to take this forward. NI Water continue to collaborate with TNI in respect of Article 11 Enforcement sites (pre 2007) where TNI hold a single bond. NI Water has also identified potential Enforcement sites (post 2007) where separate NI Water/TNI bonds apply.	
WW4	Collect accurate and reliable information on wastewater treatment facilities and sewerage infrastructure to inform development of robust holistic drainage area plans (DAPs).	NI Water has agreed with NIEA a prioritised list of 61 Drainage Area Studies for delivery during PC15. The studies will involve a comprehensive model build and verification of catchment operation for various horizons and will be used to inform both DAP capital works and WwTW upgrades. Flow and Composition studies are selectively undertaken as part of WwTW appraisals.	AIR Table 16 Section E
WW5	Ensure storm separation and sewer infiltration reduction are considered through the DAPs and that these options are adequately explored and costed before being ruled out	As part of catchment model verification anomalies in hydraulic loading will initiate infiltration investigations. DAS catchment investigations, both reactively and proactively, target opportunities for storm water removal (separation & infiltration). Cost benefit analysis of potential capital works are examined through the Needs & Options report, developed for each study area.	
WW6	Work with DRD, NIEA and other statutory partners to develop and implement catchment-based solutions (from Simulated Catchment Management Modelling - SIMCAT) for wastewater collection and treatment	NIEA has no funding to update SIMCAT, which is populated with 2009 data. The SWELL Interreg project has an output to deliver legacy deliverables, and catchment models will be provided as an output for this. .	
WW7	Work with DRD, NIEA and other statutory partners to develop a programme and target for installing appropriate spill monitoring systems across the sewerage network.	PC15 includes for the installation of CSO monitoring at priority sites including those required by revised Bathing Water & Shellfish Directives.	AIR Table 40a
WW8	Undertake work to develop a sustainable economic level of infiltration (SEIL) to inform sewerage investment decisions and deliver infiltration reduction works where this is assessed to be cost effective in addressing issues	NI Water currently exploring SELI methodology with other UK sewerage providers.	
WW9	Develop and maintain a long-term investment programme for the implementation of the PPC requirements for Odour Management. In the first part of PC15 NI Water should:	The PPC Compliance Group, a collaborative working group between NIEA and NI Water has been established and Odour Modelling prioritisation for 23 WWTWs has been established in addition to a schedule of inspections.	
WW9a	- assess the cost of complying with the PPC Regulations for all sites that are determined to be 'qualifying sites' under proposed NIEA guidance.	Project Identifier KI583 - PC15 Implementation of Odour & PPC Strategy has identified a spend of £4.4 to rectify deficiencies as identified by the joint inspections	
WW9b	- develop and agree with NIEA a prioritised programme with the aim of achieving full compliance by the end of the PC15 period (subject to priority & funding constraints).	A prioritised programme has been agreed and this is reviewed quarterly by the PPC Compliance group	
WW9c	In the second part of PC15 NI Water shall commence the delivery of this programme, with the pace determined by the relative priority of this programme, as guided by the WICG.	The initial delivery of the programme has commenced as per the prioritised programme agreed with the PPC compliance group.	

Priority	Longer Term Investment Priorities	Update on Delivery	AIR Ref
WW10	Continue a prioritised long-term maintenance and enhancement programme on wastewater treatment facilities & pumping stations to maintain serviceability and meet:	The PC15 plan was developed with stakeholder engagement and all WWTW enhancement projects have been prioritised in conjunction with NIEA. The PC15 plan was constrained within the funding limits set for the plan and while this has effectively limited the immediate number of sites for capital intervention it has provided for an extended list of wastewater sites for longer term prioritisation with the option of promoting additional outputs as circumstances prevail. Please see WW2 for additional information.	AIR Table 16 and 40a.
WW10a	- development pressures (& address overloaded works) and compliance with Water Order Consents (WOCs);		
WW10b	- reduce pollution incidents;		
WW10c	- comply with existing/revised Water Order Consents; and		
WW10d	- meet the PPC requirements.		
WW11	Continue to implement a long-term investment programme focused on providing appropriate treatment at small (>250) waste water treatment works	This programme is progressing and is planned to achieve the upgrades during PC15 as per the plan targets.	
WW12	Continue to implement a prioritised investment programme on sewage sludge treatment facilities focused on providing appropriate pollution containment and odour abatement.	Capital Maintenance Planning is ongoing at sludge treatment facilities identifying appropriate Base Maintenance on PPC and odour control. For additional information see WW9	
WW13	Develop and implement a programme to bring existing wastewater pumping stations and treatment works in to compliance with the Water Supply (Water Fitting) Regulations (Northern Ireland) 2009.	NI Water implemented a programme of work for PC15 - 'KI487 Backsyphonage Risks at NI Water Sites'. The initial desktop study for the project estimated the cost of meeting the compliance at approximately £16.2 million and this figure was included in the unconstrained PC15 budget but following the identification of a constrained budget, funding for this element of work was reduced to £1.8m, and subsequently included at this funding level within the Final Determination (FD). As a consequence a limited number of sites will be addressed in PC15.	
WW14	Continue a prioritised long-term programme of Drainage Area Plan work to:	NI Water has established a long list of Drainage Area Studies. Priority catchments agreed with NIEA will be undertaken during PC15 with and ongoing prioritisation from the long list will apply to future Price Control periods. The studies will involve a comprehensive model build and verification of catchment operation for various horizons and will be used to inform both DAP capital works and WwTW upgrades to target essential drivers e.g. flooding, pollution, headroom and serviceability.	AIR Table 16 Section E
WW1	- maintain the serviceability of the sewerage system;	See WW14	AIR Table 16
WW1	- meet development pressures (& address capacity issues);	See WW14	
WW1	- reduce sewer related flooding; and	See WW14	AIR Table 3
WW14d	- reduce UIDs and pollution incidents in line with UWWTD, MSFD, BWD & SWD.	See WW14	AIR Table 16 and Table 40a.
WW15	Work with DRD and NIEA to develop and implement a policy for addressing crossed connections to storm sewers focussed on the WFD's 'the polluter pays' principle.	NI Water and NIEA to produce a prioritised list of misconnections and establish a protocol for keeping this up to date. NI Water and NIEA to produce a misconnections leaflet and publicise the issue of misconnections to wherever appropriate.	AIR Table 47 line 13
WW16	Implement any sewerage or potable water related measures set out in the Executive's River Basin Management Plans (RBMPs).	Please see details WS2 for further information	
WW17	Continue to reduce the number of pollution incidents through effective investment and operation of the water and sewerage assets.	NI Water has developed some additional management tools now being used in PC15, which will reduce the potential number of pollution incidents. An example is the hotspotting tool which identifies areas where repeat blockages occur enabling full route cause analysis to be completed, allow for corrective action and remove the potential for future events. Work in progress also includes the development of a DWF capacity mapping tool which will provide an alert of capacity exceedance from new development proposals.	AIR Table 47 line 12

Flood Risk Management & Drainage			
Priority	**The European Floods Directive**	**Update on Delivery**	**AIR Ref**
FRM1	Develop & implement individual sewerage and drainage measures applicable to NI Water as set out in the Executive's FRMPs (2015-21).	Within the new Risk Based approach to 'Needs and Options' and 'MBVs' specification, part of this new specification is meeting with Rivers Agency regarding flooding, and developing solutions to address this flooding with a joint approach where possible.	
FRM2	Implement the inspection and maintenance requirements of the Executive's proposed Reservoirs Bill for controlled reservoirs.	NI Water have historically completed panel engineers inspections and subsequent required investment at our impounding reservoirs, without legislation being in place. The next round of inspections to inform PC21 are planned in 17/18. NI Water will continue to implement the other elements of the Reservoirs Act as the commencement orders are enacted, in particular in relation to potable water storage structures larger than 10ML.	AIR table 47 Line 7
Priority	**Drainage Planning & Modelling**	**Update on Delivery**	**AIR Ref**
FRM3	Contribute to the development of integrated drainage models and plans to manage flood risk in urban areas including completing any necessary Pilot Projects (e.g. Ballyclare).	NI Water continue to participate within Living With Water Programme and particularly Work Package 9 which seeks to integrate Rivers Agency and NI Water hydraulic models contributing to the management of flood risk through the identification and provision of protection measures.	
FRM4	Work with DRD, NIEA and Rivers Agency through the Stormwater Management Group (and through implementation of PPS 15 – Planning and Flood Risk) to progress and implement the utilisation of SuDS NI, design for exceedance and other policies for sustainable storm water management.	NI Water attend and contribute to the Storm Water Management group to develop approach's to extend the utilisation of SuDS NI. NI Water are finalising a new 'Sewers for Adoption' manual for developers which will include for Suds design. This document will be released in the Autumn of 2017.	Table 47 line 17
Priority	**Urban Drainage Provision**	**Update on Delivery**	**AIR Ref**
FRM5	Consider the costs and benefits of widening the scope of Drainage Area Studies Plans to include 'design for exceedance' in high flood risk areas and include an emphasis on improving sewerage records held on the Corporate Asset Register (CAR).	NI Water's Risk Based Drainage Area Plan specification provides for an assessment of overland flow based upon predicted flood volumes and utilising LIDAR, 2D Modelling or other techniques to assess potential flood impacts. Emphasis is given to understanding external stakeholder flood risk within the catchment with potential for integrated drainage solutions to be promoted.	
FRM6	Contribute to the development and implementation of a prioritised Government programme of integrated drainage schemes to manage surface water flooding in urban areas (incorporating storm drains, sewers and watercourses). This includes assisting in the development of integrated flood modelling in specific locations on a case by case basis, where Stakeholders agree that this is necessary, and the apportionment of appraisal, modelling, and survey costs can be agreed in advance.	NI Water attends the Flood Investigation Coordination Group (FIPG) meetings at which responsibility for developing tactical solutions for flood issues are agreed. As a result NI Water has participated in and lead a number of studies that have developed integrated solutions. NI Water has fully participated in the DfI's 'Improved Surface Water Management' workstream, providing input material and reviewing documents. NI Water is also participating in DfI's Living With Water Programme (LWWP) and awaits guidance from DfI on how the recommendations resulting from the 'Improved Surface Water Management' workstream will influence the investment appraisal and planning work being progressed to inform the Belfast Strategic Drainage Infrastructure Plan and the NI Integrated Drainage Investment Planning Guide.	
Priority	**Sewer Flooding (DG5)**	**Update on Delivery**	**AIR Ref**
FRM7	Continue to address out-of-sewer flooding problems attributed to NI Water's sewerage and drainage networks	NI Water are continuing to invest, as per the PC15 plan in providing engineering solutions to remove internal flooding of properties attributed to NI Water's sewerage network. These are commonly referred to as DG5 removal projects.	AIR Table 3 Section A
Priority	**Combined Sewer Separation and Infiltration Reduction**	**Update on Delivery**	**AIR Ref**
FRM8	Work with DRD, NIEA, Rivers Agency and other stakeholders to develop and commence a long-term storm water separation and infiltration reduction programme focussed on addressing UIDs, pollution incidents, sewer flooding, surface water flooding and providing capacity for development.	NI Water is developing a programme of storm separation projects using bespoke software to identify opportunities. The objective is to complete a range of projects e.g. urban housing, large commercial, educational campus etc. An examination of cost/benefit relationship will be used to inform a more focussed business case for PC21 projects.	Table 47 line 14
Priority	**Emergency Flood Response**	**Update on Delivery**	**AIR Ref**
FRM9	Contribute to the delivery of an efficient and effective coordinated response from Government during flooding incidents (in line with PEDU).	NI Water has a well-developed Major Incident Plan that provides a fully planned reactive response to all types of emergency incident. The annual audit of NI Water's emergency planning arrangements has been completed by an independent Certifier for 2017, and the final Audit Report submitted to the Department for Infrastructure's Water & Drainage Policy Division. NI Water is represented on the DfI 'Emergency Planning Steering Group'. This group now includes the three main drainage agencies: DfI Rivers, DfI Roads and NI Water. DfI Rivers has completed a 2016/17 review of its Flooding 'Toolkit' which details flood emergency response procedures where DfI has a Lead Government Department role. NI Water has contributed to the review and participated in a DfI multi-agency flood-response training exercise in June 2017. NI Water continues to be a member of the multi-agency 'Flood Strategy Steering Group' (led by DfI Rivers) and contributes to the 26 related multi-agency 'Regional Community Resilience Group' forums across Northern Ireland. NI Water continues to engage with multi-agency partners through the five Northern Ireland 'Local Emergency Preparedness Groups' (EPGs) (Belfast, Southern, Eastern, Western and Northern) and related working groups (e.g. flooding and communications working groups). All EPGs tested their Coastal Flood Plans during 2016/17 and NI Water fully participated in these multi-agency exercises. The Company is also represented on the principal strategic emergency preparedness body for the public sector in Northern Ireland, the 'Civil Contingencies Group (NI), and continues to keep pace with wider developments through involvement with UK water industry emergency planning groups.	

Service Delivery, Improvement and Affordability

Priority	Customer Priorities for Customer Service, Information & Communication	Update on Delivery	AIR Ref
CS1	Continue to review and improve performance in customer service quality and effectiveness through the development of better data and information systems and customer focussed processes and policies	With regard to customer data, there is a programme of projects being progressed in respect of data accuracy and data validation. In addition, there are data accuracy obligations imposed on the service provider under the CBC contract.	
CS2	Improve the accuracy, reliability, security, and consistency of billing information including enabling customers to self serve	With regard to customer data, there is a programme of projects being progressed in respect of data accuracy and data validation. In addition, there are data accuracy obligations imposed on the service provider under the CBC contract. A self service website has been launched and this will continue to be developed as part of the future services improvement requirement under the CBC contract	
CS3	Adopt any proven technology or systems that provide tangible benefits in terms of improving service performance or reducing operational costs, whilst ensuring the resilience and security of essential control and monitoring networks. (e.g. ICAT programme)	The delivery of the ICAT programme has commenced with a large number of Potable storage tanks having ICAT technology installed during PC15. This technology is to be used to control inlet flows to maximise storage, improve resilience and enable remote control during operational events. The technology will also enable system control functionality where a number of sites are grouped into an overall system to improve performance. The Omagh and Cookstown areas are due for completion in Summer 2017.	Table 47 line 4
CS4	Continue improvements in handling customer queries, complaints and billing (DG6-9).	FPCOR (First Point of Contact Resolution) functional targets have been set, these are monitored at monthly meetings to ensure improvements in handling customer queries, complaints and billing	AIR Table 4 Section A
CS5	Work with stakeholders through the Customer Measures and Satisfaction Group (CM/SAT) to develop more consumer focussed performance measures, including:	We have agreed the following quantitative and qualitative measures with the CM/CAT group : Unwanted Contacts, FPOCR and Customer Advocacy score. The remainder of PC15 will be used to understand trends with a view to having hard performance measures in place for the beginning of PC21	
CS5a	i) New consumer satisfaction (CSAT) Key Performance Indicator which gives a measure of customers' overall satisfaction with the service provided by NI Water; and		
CS5b	ii) Adoption of industry best practice measures for performance on handling customer contacts for example:		
CS5bi	- customer contact levels (through all communication channels);		
CS5bii	- first point of contact solutions; and		
CS5biii	- repeat contacts		
Priority	**Customer Priorities for Water Service Levels**	**Update on Delivery**	**AIR Ref**
CS6	Develop quality drivers and measures for the water mains rehabilitation programme informed by drinking water quality monitoring and customer complaints (iro colour, taste & odour).	The WIIM methodology for prioritising replacement pipelines in the distribution network , includes WQ failures as drivers for pipeline replacement. This a Core Business Activity. For the 2016 reporting year NI Water achieved its drinking water quality targets and is on profile to achieve its targets in 2017.	AIR Table 47 line 2 and 8
CS7	Continue to reduce the number of properties that experience unplanned and unwarned interruptions to drinking water supply in excess of 3/6/12/24 hrs (DG3).	WIIM process already in place as developed for PC15 but will continue to refined. Latest WIIM review of the methodology (WIIM3) now includes better informed DG3 analysis. This is one element of the overall Capital Maintenance Planning process. The Water Resource & Supply Resilience Plan will include a number of resilience project proposals.	AIR Table 2 Section B 5-8 and AIR Table 47
CS8	Target areas of low pressure to increase the number of customers who benefit from at least the minimum levels of supply.	NI Water continues to invest in watermains rehab and within this sub prog properties on the DG2 register are targeted to ensure that post investment they receive the minimum levels of supply. The PC15 investment is currently on track as per the agreed investment levels	AIR Table 2 Section A
CS9	Continue to maintain a Register (DG2) of properties at risk of receiving low pressure and reduce the number of properties on the register over the PC15 period	NI Water has by assessing pressure across its water network prepared a the DG2 register of properties at risk of receiving low pressure. Following capital investment verification is completed to determine if properties can be removed from the register.	AIR Table 2 Section A
Priority	**Customer Priorities for Sewerage Service Levels**	**Update on Delivery**	**AIR Ref**
CS10	Establish and maintain a Register (DG5) of properties at risk from internal & external sewer flooding and reduce the number of properties on the register over the PC15 period.	NI Water developed a register of properties at risk of internal sewer flooding during PC10. This confidence in the data originally was low but this has improved significantly over recent years. The DG5 external register has been developing. PC15 investment is focused on removing properties from the internal flooding register.	AIR Table 3 Section B
CS11	Work with Roads Service, Rivers Agency and other relevant drainage providers to develop a register of properties at risk of surface water flooding to be actioned 'jointly' during PC15 and beyond. NI Water should provide the information on out-of-sewer flooding from sewerage and relevant drainage assets.	FIPG maintain a register of flooding locations which require collaboration between the main drainage agencies. FIPG meet bi-monthly and review progress on resolution of issues. NI Water participate fully in FIPG providing information and leading on a number of joint projects.	AIR Table 3 Section B
Priority	**Customer Priorities for Affordability & Efficiency**	**Update on Delivery**	**AIR Ref**
CS12	Explore opportunities to reduce the cost of its existing Public Private Partnership contracts to reduce their long-term running costs.	Cost efficiencies to date include aligning the Alpha Contract water quality standards to that of the Regulatory water quality standards. Energy efficiency measures and annual energy audits to reduce power costs are also ongoing. Other cost efficiencies measures are currently being explored.	
CS13	Reduce costs by setting targets and developing and implementing action plans to deliver operational efficiencies.	BAU/Core Business. Significant input was completed during PC13 and this will be continually reviewed as part of BAU to ensure the most efficient operational regime is maintained as the supply network changes during periods of normal operation, drought and winter critical periods. PC15 is implementing the first phase of ICAT on the SR asset base with over 30 sites already fitted with the technology. Dedicated energy efficiency team has been established and is pursuing as BAU Short and medium term energy efficiency targets for NI Water have been developed for the PC15 period. These are under review as challenges such as grid connections, and closure of incentive schemes, are considered. RDI Strategy has and continues to support the identification and implementation of improved performance and efficiencies through collaborative RDI. Continued membership and participation in UKWIR projects and other water industry focused collaborative projects. NI Water have deployed a modern meter data management system to collect record meter reads on site and return to the corporate billing system in real-time. We are starting deployment of automatic meter reading equipment and utilising mobile telephone technology to remotely read key meters.	AIR Chapter 30

Sustainability, Climate Change and Resilience			
Priority	**Project Appraisals**	**Update on Delivery**	**AIR Ref**
SSR1	Revise the project appraisal process to ensure that investment decisions take account of 'whole-life' costs (including the cost of the CRC Energy Efficiency Scheme) and benefits of proposed solutions. Whole life carbon costs should be factored into appraisals for projects costing over £500k (and any other projects where carbon is likely to be a material consideration). Where there is a marginal NPC difference between a solution with the lowest NPC and a solution that offers significantly lower whole life emissions, the lower emission solution should be selected.	These actions are already included as part of the Capital Appraisal process. NI Water are currently completing a full review of the appraisal process, and will refine the process to improve it further.	
SSR2	Long-term social, economic & environmental sustainability should be considered in all project appraisals.	NI Water are reviewing the Appraisal Report and Business Case Templates ensuring they align with the NIGEAE 10 Step approach including Step 7 – 'Weigh up non-monetary costs and benefits'	
SSR3	Explore opportunities with Forest Service and other partners to offset existing and future energy demands (e.g. carbon offsetting through forestry, green energy production through wind turbines or wood chipping).	NI Water have explored a number of renewable investment types. Due to recent changes in ROC's a number of initiatives have not been deemed economic. 1.2 MWP of Solar installations have been completed to date across the NI Water estate and other opportunities will be explored as they become known.	
SSR4	For every WWTW site on which NI Water needs to carry out an appraisal to inform capital investment, due to base maintenance or enhancement drivers (quality, growth or service levels), the project appraisal shall assess if a more sustainable solution option is feasible, and determine any land acquisition requirements.	PC15 FD includes for sustainable solution targets. Each WWTW appraisal now examines potential sustainable solutions with examples including ICW's, Reed beds and similar technology. During PC15 an ICW has been constructed at Castlearchdale. Further pilot projects are planned with a variety of sustainable solutions to gain confidence in long performance and value for money.	AIR Table 16 section H
Priority	**Project Planning and Risk**	**Update on Delivery**	**AIR Ref**
SSR5	NI Water should carefully plan the early stages of project development and consider risks to project delivery, which may include progressing trial projects and working with other stakeholders to identify solutions and secure support that these risks be accepted and managed.	Project planning and risk is managed as a BAU item on all projects. Stakeholder engagement is important on key projects and examples demonstrating this in action include the WR&SR plan (see WS3) where a steering group has met circa every 6 weeks during the project development. For WWTW NI uses a process selection matrix, including processes that are endorsed by stakeholders. For new processes e.g. ICW's NI Water engage with stakeholders to ensure acceptance in principle of the process.	
Priority	**Research Development and Innovation**	**Update on Delivery**	**AIR Ref**
SSR6	Maintain and implement a Research Development and Innovation (RDI) strategy.	NI Water have an (RDI) strategy in place. The main emphasis within the strategy is that NI Water operates on a fast follower principle.	
Priority	**Renewable Energy**	**Update on Delivery**	**AIR Ref**
SSR7	Explore opportunities to invest in renewable energy generation to reduce running costs at existing high-energy facilities.	NI Water has invested in solar panels at 55 sites around the province, availing of incentive schemes at multiples of 4, 3 and 2 ROCS. Solar PPAs are being considered. Dedicated energy efficiency team has been established and is pursuing as BAU.	AIR Chapter 30
SSR8	Explore opportunities to generate renewable electricity through innovative management of existing water and sewerage assets such as: generating hydro-power from excess water mains pressure and installing solar panels at facilities.	NI Water have completed a Business Case on using Hydro power within the distribution/trunk network. To date no solution has been found that has been economically viable. Solar has been successfully installed on a number of sites. Hydro is still be examined from a Water Resource perspective to determine if an economic solution can be repeated, similar to technology already installed at Foffany WTW where energy generated from raw water can be used to power the treatment process units on the site.	AIR Chapter 30
SSR9	NI Water shall seek to maintain the level of energy purchased from external renewable sources to that achieved in the PC13 period, whilst increasing the percentage of renewable energy generated by use of its own assets and lands and contribute to achieving the Executive's greenhouse gas emissions reduction target.	NI Water continues to purchase a significant amount of green energy from the grid and is meeting the PC15 targets. NI Water have been successfully investing in renewable energy, particularly Solar recently in PC13 and PC15, but examination is being completed on a number of technologies to provide other economic solutions.	AIR Table 45
Priority	**Sustainable Treatment & Regulation**	**Update on Delivery**	**AIR Ref**
SSR10	Where NI Water believes that a license, consent, or permit proposed or set by NIEA is unnecessarily stringent or does not adequately consider a catchment based approach, NI Water should seek to challenge and resolve this with NIEA initially, and then if not resolved, by escalating this to the WICG for wider consideration and direction by stakeholders. The objective should be to develop more sustainable treatment solutions	This action is actively challenged for all design standards offered by NIEA under BAU. NIEA are supportive of sustainable solutions, where appropriate, and have supported a deviation from the full RBC approach for small works, below 20pe. Moneyreagh WwTW identification of infiltration and removal from the system is another example where we are working with NIEA to reassess the standards of the discharge from this site, in conjunction with hydrology team in NIEA reassessing the river flows, following rerouting of infiltration directly to the adjacent watercourse, giving a better flow in the watercourse, hence better dilution.	
SSR11	Complete a number of sustainable wastewater treatment 'pilots' early in PC15 to compare the costs and performance of various options. Develop & commence a long-term investment programme of sustainable wastewater treatment schemes (including the land requirements) with the core aim that this reduces NI Water's long-term operating costs and emissions.	Castle Archdale Integrated Constructed Wetland has come into operation and along with Stoneyford ICW is currently undergoing performance monitoring. Further sustainable treatment pilots are proposed at Clabby WwTW, Co Fermanagh using a Phragmifilter Reed Bed System for installation as part of the PC15 WWTW's nominated outputs programme.	AIR Table 16 Section H
SSR12	Identify and secure sufficient land early in the project phase to give the option of the selection of larger footprint process solutions that typically result in lower operating costs. Consider the advanced purchase of land to accommodate future expansion of works using more sustainable solutions.	The project business case will proactively identify land purchase requirements as developed for each Price Control.	
SSR13	Aim to gradually deliver year on year increases in the percentage of new WWTW investment (assessed by Population Equivalent served) delivered by 'more sustainable solutions' so that: By 2020/21 33% of all WWTW upgrades to works serving a PE of <2,000 are delivered by more sustainable solutions. Where viable, more sustainable WWTW solutions should also be used for works serving a PE > 2,000	Castle Archdale Integrated Constructed Wetland has come into operation and along with Stoneyford ICW is currently undergoing performance monitoring. A further much larger ICW is planned for Ballykelly later in PC15. Further sustainable treatment pilots are proposed at Clabby WwTW, Co Fermanagh using a Phragmifilter Reed Bed System. Other more sustainable solutions are being considered including nitrifying biological filters, deep lagoons and granular sludge technologies at appropriate sites.	AIR Table 16 Section H

Priority	Education & Public Awareness	Update on Delivery	AIR Ref
SSR14	NI Water should continue to invest in education and campaigns to promote prioritised key messages such as the importance of insulating (freeze-thaw), using water wisely (water efficiency), bag it and bin it (preventing pollution) and measures to prevent flooding due to other causes through continued work of the water bus and school visits, and other educational means. NI Water should learn from the impact of previous campaigns and demonstrate how future campaigns will reach consumers more effectively.	Through the work of the Waterbus and school visits, all schools (both Primary and Secondary) are offered education talks on our key water efficiency messages as well as being taught about the value of water. Communicating our key Bag it & Bin it messages and Freeze/Thaw protection via Radio/Print/Social Media. Also attending community events and delivering community and school talks. The overall objective of the strategy is to educate and increase public awareness by providing important information via all the communication channels at our disposal. Another action of the strategy was the appointment of Environmental Champions enabling the key messages to be delivered to a wider audience. NI Water delivers our key FOG (Fat, Oil and Grease) messages to schools, community groups and businesses. We have a community outreach programme which focus on delivering education programmes and public awareness campaigns on the importance of correct disposal of FOG and highlight how this can reduce the risk of pollution.	AIR Chapter 1
SSR15	NI Water should seek to develop effective partnerships with other organisations where there are shared benefits of the campaign (such as with DSD on Lead).	NI Water work with a range of stakeholders to promote our key messages around Water Quality and the benefits of drinking tap water. These Stakeholders include, Community Groups, Schools, Education Board, Media, CCNI, Regulator, DWI, DfI to name but a few. Water for Health is one of our key campaigns and we deliver it all year round through our Education programme. Water for Health/Water Quality is part of the organisation's CSR, Communications and Education strategy and is a priority for the company.	AIR Chapter 1
Priority	**Preservation of Services**	**Update on Delivery**	**AIR Ref**
SSR16	Comply with the requirements of the Preservation of Services and Civil Emergency Measures (Relevant Undertaker) (Northern Ireland) Direction 2010 and any supplementary Guidance issued by DRD. • Provide DRD with an annual audit laying out the requirements in the Direction.	Presently we are on target to deliver the security hardening measured outlined and subsequently approved in our PC15 submission. The PC15 programme of work comprises: - Security harden 52 Enhanced Service Reservoirs at a budget cost of £2,500k- target date for completion June 2017 - Security harden 13 Water Treatment Works at a budget cost of £1,700k- target date for completion late 2018. - Security harden 2 Waste Water Treatment Works at a budget cost of £400k- target date for completion before end of PC15 It should be noted that Dalriada Water also has a security hardening programme for security hardening at the sites which they operate on our behalf, albeit the cost of this work is borne by DW and not NI Water and was not included in our PC15 submission. This programme of work is independently reviewed by the Certifier as part of the annual PSCEMD audit and for CNI sites only there is separate independent audit of CNI sites. Both audit reports for 2016/17 have been submitted to DfI confirming that the work carried out to Date is compliant with regulations and progress is satisfactory.	AIR Table 47 line 3
SSR17	Ensure:	Please see SSR16 above for information	
SSR17a	• All CNI sites continue to meet latest security advice; and	Please see SSR16 above for information	
SSR17b	• Implementation of a prioritised plan for securing other identified sites to required standards.	Please see SSR16 above for information	
SSR18	impounding	Please see SSR16 above for information	
Priority	**Resilience**	**Update on Delivery**	**AIR Ref**
SSR19	Provide training and testing of appropriate protocols and Guidance issued under the Direction. Review and update major incident plans to reflect lessons learned	There is a year on year requirement to review the effectiveness of emergency plans and submit an independent audit report covering all aspects of emergency planning required under PSCEMD to the Department for Infrastructure (DfI) by 31st March each year. Typically the independent Certifier, approved by Defra, is provided with details on: • Staff training delivered • Exercises carried out including outputs and outcomes • Updates to Major Incident Plans and response protocols, implemented since the previous review. In consideration of the above the independent Certifier prepares the audit report and Statement of Compliance issued to DfI, by the due date each year.	
SSR19a	1) Water supply	Please see SSR19 above for information	
SSR19b	2) Prevention of internal flooding (e.g. due to a sewer pumping station being flooded)	Please see SSR19 above for information	
SSR19c	3) Prevention of pollution (e.g. due to WWTWs or SPS being flooded)	Please see SSR19 above for information	

Tourism, Recreation & Biodiversity			
Priority	**Estate Management**	**Update on Delivery**	**AIR Ref**
TRB1	Contribute to the development and implementation of the NI Biodiversity Plan.	Development and implementation of the NI Biodiversity Plan is underway as required	
TRB2	Develop & implement an estate management strategy to take account of: the primary water and sewerage functions; protected areas; the need to enhance biodiversity; the need to permit public access to support tourism and healthy lifestyles; and the need to increase opportunities for providing recreational amenities for interest groups.	A project has been created to improve site security; public safety; and enjoyment of permitted recreational activities at several locations. Work includes construction of steps and handrails; accessible fishing stands; construction of paths and walkways; construction of boardwalks; extension and repair of car parks; construction of slipway; erection of fencing and gates; installation of benches, picnic tables and bins; provision of signage; and provision of life saving equipment. Phases 1 & 2 complete. Phase 3 planned to commence summer 2017.	
TRB3	Continue to develop partnerships (e.g. SCAMP NI) with other public, community & voluntary sector organisations to deliver sustainable catchment initiatives.	Engagement and development of partnerships with key stakeholders is being carried out on an ongoing basis as required to deliver sustainable catchment initiatives.	AIR Table 47 Line 9
TRB4	Explore opportunities for leasing NI Water land and assets for leisure, tourism and income generation where appropriate.	No locations have been identified as suitable to date.	
TRB5	Adopt and implement the 'Protocol for the Care of the Government Historic Estate'. Develop a long term plan to bring assets covered by this, where necessary, up to a suitable standard and maintain them going forward.	Specialist architect appointed to undertake Condition Assessment Reports for assets listed on NI Water's historic estate register, in line with the requirements of the Protocol. The recommendations from the survey reports will be used to collate a programme of work to ensure assets are up to a suitable standard, subject to availability of funding. A capital programme has commenced on Mourne Wall to implement repairs to areas of damage.	
TRB6	Explore opportunities to celebrate the local water industries influence on the social, cultural, industrial & natural heritage of Northern Ireland.	NI Water work with a range of stakeholders to promote and celebrate the local water industry's influence on both the natural and built heritage, we do this through a joined-up approach with like minded organisations, such as the MHT, Newry, Mourne and Down Council as well as local 'user groups' . NI Water participate in special designated events to promote the important relationship between Water, Heritage, Social and Culture. These events include-EHOD, WED, WWD, Open Days, Specialised Lecturers etc.	AIR Chapter 1
Priority	**Bathing Waters & Clean Beaches**	**Update on Delivery**	**AIR Ref**
TRB7	Contribute to the implementation of the NI Marine Litter Strategy and the protection of Bathing Waters and Shellfish Waters from pollution.	NI Water continues to deliver wastewater education campaigns to highlight education and awareness for appropriate use of sewerage systems. Community engagement projects have been delivered to extend education and awareness for fats, oils and grease and sewage related debris. Compliance with water order standards at coastal works has assisted with protection of protected waters. Ballycastle WwTW being progressed, with provision of secondary treatment. LWWP will contribute to delivery of water quality improvements in Belfast Lough, whilst a capital works upgrade in Dundrum and Carrigs River investigations will contribute to identifying actions and hence assist with driving water quality improvements in Dundrum Bay.	
TRB8	Put a programme in place to reduce the risk of pollution from the sewerage system during PC15, informed by the Marine Conservation Society Pollution Policy and Position Statement on CSOs	There is a programme to install CSO monitors at prioritised sites throughout PC15. The technology is at trial stage in the field, to assess suitability. Following the trial and approval to proceed to the next stage, installation will be rolled out to all CSOs within 2km for designated bathing and shellfish waters. In addition, funding has been allocated for installation of monitors at 65 No. inland CSO's and the same technology will be used for these monitors.	
Priority	**Reservoirs**	**Update on Delivery**	**AIR Ref**
TRB9	Progress the assessment of 'unused' reservoirs to determine the approach to disposal.	NI Water have commissioned Abandonment/Discontinuance Scoping Report to be carried out at a number of reservoirs. The Outputs of this will be available in PC15.	

Annual Information Return 2017

Section 3

Level of Service Methodologies

Northern Ireland Water

Level of Service Methodology

DG2 - Pressure of Mains Water

This document has been laid out in accordance with the guidance provided by NIAUR in the Annual Information Return Reporting Requirements 2017: Section 7 – Levels of Service Methodology Appendix

DG2 – Pressure of mains water

1. **Methods and procedures**
2. **Extract from DG2 register**
   - provide an extract from DG2 register
3. **Sources of information**
4. **Scope and coverage**
5. **Assumptions and exclusions**
   - including any assumptions made for surrogate for the reference level.
6. **Other issues**
   - provide any further information on issues that have arisen in the report year that impact on your methodology for reporting in the Annual Information return.

The procedure for the investigation and recommendation for removal and addition of properties to the DG2 Register is based on the 'DG2 NIWL Procedures April 2010' document produced by the Leakage Data Management Unit. The objectives of the investigation are as follows:

i. Removal/Addition of DG2 entries on the register as a result of more robust data being available (Better Information).
ii. Removal/Addition of DG2 entries resulting from capital works and networks improvements (Company Action).
iii. Investigation of customer 'Low Pressure' complaints.

1. Methods and Procedures

DG2 Investigations (excluding Rehab modelling)

The objective of a DG2 site investigation is to acquire the necessary data to allow a more detailed assessment to be carried out. The 2 key elements of this investigation are the logging of the water pressure and the gathering of accurate height data for both the logging point and DG2 property connection point. In keeping with 'DG2 NIWL Procedures April 2010', the following procedures are followed:

- Logging points are identified within the network, which do not exceed 250m in distance from the DG2 stopcock.
- The logging points are within the same DMA/PMA as the DG2 property.
- A unique logger ID is clearly assigned to the logging point.
- An accurate elevation of each logging point is provided using Real Time Kinematics (RTK) GPS. A value of 450mm is subtracted from this elevation to allow for the depth of the FH spindle.
- Logging point boundary polygons around the hydrants are digitised onto MapInfo to allow the associated properties to be assigned to the relevant logger.
- A pressure log and elevation may be taken in adjoining DMAs. This is to assist in identifying any potential for a BV change to improve the pressure at the DG2 property.
- A new ferrule elevation is produced for each property using Digital Elevation Model (DEM) 2008 data. The ferrule point value associated to each property is used to determine the height used for that property within the Total Head calculation.

To assist with the site investigation, a detailed map is produced showing the following information:

- Pointer Property data showing elevation at each property (NIW receives biannual updates from Ordnance Survey Northern Ireland).
- Water pipes, fittings i.e. SVs, Fire Hydrants (FHs) terminating nodes etc.
- DMAs and PMAs (where applicable).
- Background Vector maps.
- Required pressure logging points.

Reporting

Following field testing and site investigation routines, all data is analysed and the findings are included within a Recommendation for Removal Report or alternatively a Recommendation for Inclusion Report.

1. The removal of entries due to robust data being available.
2. The removal of genuine entries resulting from infrastructure changes.
3. The provision of detailed information to support the inclusion of properties in the DG2 Register.

If the data collected verifies that properties that are in receipt of a pressure >15m, then the DG2 properties are recommended to NIW for removal. Properties removed are supported by a brief technical assessment based on pressure loggings, RTK GPS height data and other relevant factors including the required pressure logging trace/print out.

Where properties are discovered to have been positioned incorrectly within NIW GIS resulting in their inclusion in the original register, and repositioning indicated that these properties were in receipt of pressure > 15m, these DG2 properties are recommended for removal.

Those properties identified as being in receipt of a pressure <15m remain on the Register and a brief technical assessment based on pressure loggings, RTK GPS height data and other relevant factors, including the required pressure logging trace/print out, is provided. Prior to this information being provided a brief assessment is undertaken to determine if the properties could be transferred onto an adjoining DMA/PMA. This information is included within the assessment where deemed viable.

Additional properties within logging areas determined to be in receipt of pressure <15m are recommended for inclusion on the register. As above a brief technical assessment based on pressure loggings, RTK GPS height data and other relevant factors, including the required pressure logging trace/ print out, is provided. Prior to this information being provided a brief assessment is undertaken to determine if the properties could be transferred onto an adjoining DMA/ PMA. This information is included within the assessment where deemed viable.

The potential removal of properties due to networks improvements is investigated via rationalising adjacent DMA boundaries following pressure loggings as per guidelines set out in the method statement above. All networks amendments follow the removal process and the submission of final reports leads to an update of the DG2 register.

DG2 Investigations by Rehab modelling

In the case of Rehabilitation schemes, PPRA reports associated with the various work packages are submitted to Asset Management Directorate for sign off and Leakage Function for processing in relation to the update of the DG2 Register. Leakage Data Management Unit on receipt of the suite of information including logger positioning site maps, accompanying logged data, PPRA reports and DG2 Investigation Reports align this

data to the existing register. Checks are conducted on logged information to ensure compliance in terms that each logger site is within 250m of actual properties highlighted and that minimum pressures provided correlate to expected total head values. Hyperlinks are created for each set of logged data, map and report. The DG2 register is updated accordingly.

Investigation of customer 'Low Pressure' complaints

Where low pressure complaints have been identified through the contact centre, the process of action is as follows:

- Contact Centre informs customer of known network planned or unplanned events in the area or determines if problem may be with customer supply only.
- Networks' first responder visits property to determine if pressure is a legitimate complaint. If pressure at property is assessed as being a potential DG2 issue, the complaint is passed to Leakage DMU for investigation.

Leakage DMU undertakes an investigation in accordance with 'Methods and Procedures' above. Additions and removals are processed accordingly. The facility has been developed for regular monthly updates of all DG2 properties to be uploaded onto the CARtoMAP system, which is utilised by the Contact Centre in relation to low pressure complaints from customers.

UPRN	Status Date	Status	Building Nr	Primary_Thorfare	Town	Postcode	County	DMA	Pressure
187100513	30-Nov-12	In Register	181	[redacted]	Ardglass	[redacted]	Down	Sentry Hill	13.47
185292371	30-Sep-12	In Register	2	[redacted]	Ardglass	[redacted]	Down	Loughrans Tower	14.97
185292234	30-Sep-12	In Register	2	[redacted]	Ardglass	[redacted]	Down	Loughrans Tower	13.87
185292230	30-Sep-12	In Register	1	[redacted]	Ardglass	[redacted]	Down	Loughrans Tower	14.12
185290343	30-Sep-12	In Register	183	[redacted]	Ardglass	[redacted]	Down	Sentry Hill	13.07
185778557	30-Sep-12	In Register	10	[redacted]	Ardglass	[redacted]	Down	Loughrans Tower	14.79
185292251	30-Sep-12	In Register	5	[redacted]	Ardglass	[redacted]	Down	Loughrans Tower	13.90
185292239	30-Sep-12	In Register	3	[redacted]	Ardglass	[redacted]	Down	Loughrans Tower	14.01
185292245	30-Sep-12	In Register	4	[redacted]	Ardglass	[redacted]	Down	Loughrans Tower	13.82
185292368	30-Sep-12	In Register	16	[redacted]	Ardglass	[redacted]	Down	Loughrans Tower	14.71
185292366	30-Sep-12	In Register	14	[redacted]	Ardglass	[redacted]	Down	Loughrans Tower	14.86
185292364	30-Sep-12	In Register	12	[redacted]	Ardglass	[redacted]	Down	Loughrans Tower	14.89
185292362	30-Sep-12	In Register	10	[redacted]	Ardglass	[redacted]	Down	Loughrans Tower	14.95
185292259	30-Sep-12	In Register	8	[redacted]	Ardglass	[redacted]	Down	Loughrans Tower	14.06
185292258	30-Sep-12	In Register	7	[redacted]	Ardglass	[redacted]	Down	Loughrans Tower	13.82
185292257	30-Sep-12	In Register	6	[redacted]	Ardglass	[redacted]	Down	Loughrans Tower	13.89
185207712	31-Aug-12	In Register	156	[redacted]	Donaghadee	[redacted]	Down	Portavoe Donaghadee	7.94
185207711	31-Aug-12	In Register	154	[redacted]	Donaghadee	[redacted]	Down	Portavoe Donaghadee	8.07
185207710	31-Aug-12	In Register	152	[redacted]	Donaghadee	[redacted]	Down	Portavoe Donaghadee	8.44
185207709	31-Aug-12	In Register	150	[redacted]	Donaghadee	[redacted]	Down	Portavoe Donaghadee	8.65
185207714	31-Aug-12	In Register	160	[redacted]	Donaghadee	[redacted]	Down	Portavoe Donaghadee	7.51
185207715	31-Aug-12	In Register	162	[redacted]	Donaghadee	[redacted]	Down	Portavoe Donaghadee	7.43

3. Sources of information

For AIR17 the following information was used

- Post Project Rehabilitation Assessment reports (PPRAs) and their associated DG2 Investigative Reports (DIRs) are submitted when specific watermain rehabilitation schemes are completed and include the relevant data and reports to merit alterations to the DG2 register.
- Recommendation for Removal reports are produced on conclusion of networks improvements to merit deductions from the DG2 register.
- Recommendation for Inclusion reports are produced to substantiate the addition of properties to the DG2 register based on better information.

4. Scope and coverage

The ongoing maintenance of the existing DG2 register through the removal of properties due to company action via the processing of PPRA reports submitted during the reporting year. These are the direct result of work the majority of which were completed in the 2016/17 year. Similarly, additions to the company register were processed where better information became available.

5. Assumptions and exclusions

NI Water does not currently have in place a permanent pressure monitoring network and is not in a position to identify exclusions arising from intermittent network incidents or infrastructure changes. Assumptions for AIR17 are identified in the methodologies described above. A surrogate pressure of 15m has been used to identify DG2 properties.

Deviation from the conditions laid out by NIW for DG2 property investigations.

Due to the rural nature of some DMAs, it is not possible in some exceptional cases, i.e. groups of DG2 entries within individual DMAs, to undertake logging within 250m of the DG2 property as set out in the NIW methodology. In these instances, a number of Fire Hydrants are logged to enable an accurate pressure profile of the DMA to be established.

The following alternative procedure is used:

- A desktop study of the DMA containing DG2 entries is undertaken.
- A series of FHs are identified for pressure logging. The locations are selected to ensure that an accurate pressure profile of the DMA is established.
- Data loggers are fitted to log the pressures over a seven day period.
- All logging points are surveyed using RTK GPS; this provides accurate height data for Total Head calculations. A value of 450mm is subtracted from the elevation to allow for the depth of the hydrant spindle.

On compilation of this data, a revised analysis is undertaken to determine the nature of supply and create a pressure profile within the DMA/PMA to determine potential DG2 entries. If the pressure profile shows that the Total Head within the DMA/PMA is sufficient to provide adequate pressure, the results from the field testing and analysis are presented as evidence for removal of the DG2 entries and a Recommendation for Removal Report is issued.

In line with previous procedures, where analysis identifies properties that are in receipt of a surrogate pressure <15m, they will remain, or be added to the Register in accordance with NIW procedure.

Northern Ireland Water

Levels of Service Methodology

DG3 Supply Interruptions

This document has been laid out as follows:

1.0 OBJECTIVE & AIM

To identify the number of properties affected by planned and unplanned supply interruptions lasting longer than 3 hours, 6 hours, 12 hours and 24 hours.

The aim of the register is to allow verification and audit of the reported information for DG3 and to enable the identification of the properties affected. It should contain information on the timing, duration and cause of each interruption and sufficient information to enable all properties affected by interruptions lasting more than three hours to be identified. Therefore, the register should include:

- properties affected (by name and location or number and street);
- date and time of interruption;
- duration of interruption and time supply restored;
- cause of interruption;
- notice given; and
- the name of person responsible for entering records in the system.

The DG3 Interruptions to Supply Register is compiled and held by CSD Services in Capital House.

2.0 REPORTING REQUIREMENTS

The information to be reported within Table 2 of the Annual Information Return (AIR) is as follows:

2.1 Line Descriptions

Line	Description
5	More than 3 hours unplanned
6	More than 6 hours unplanned
7	More than 12 hours unplanned
8	More than 24 hours unplanned
9	More than 3 hours planned and warned
10	More than 6 hours planned and warned
11	More than 12 hours planned and warned
12	More than 24 hours planned and warned
13	More than 3 hours unplanned caused by third parties
14	More than 6 hours unplanned caused by third parties
15	More than 12 hours unplanned caused by third parties
16	More than 24 hours unplanned caused by third parties
17	More than 6 hours unplanned due to overrun of planned and warned
18	More than 12 hours unplanned due to overrun of planned and warned
19	More than 24 hours unplanned due to overrun of planned and warned

Note: Interruptions should be reported under each relevant time band so that the category for interruptions exceeding:

- 3 hours also includes all interruptions lasting more than 6 hours;
- 6 hours also includes all interruptions lasting more than 12 hours; and
- 12 hours also includes all interruptions lasting more than 24 hours.

Each interruption should be classed as a single interruption event, and should be recorded under only one of the four categories of: unplanned or unwarned, planned and warned, unplanned caused by third parties and, unplanned or unwarned due to overruns of planned

and warned interruptions. If there are a significant number of overruns between 3 and 6 hours, the number should be reported in the commentary.

Further guidance, if required may be found in the Annual Information Return Reporting Requirements & Definitions Manual 2015, Issue 1.0 – March 2015.

3.0 DEFINITIONS

3.1 Interruption

An interruption to supply is defined as the actual loss of water supply to a property, whether planned or unplanned, warned or unwarned.

Supplies may be affected by other factors, for example, lower pressure through the flushing of mains, or restrictions on use. These are also covered under the DG2 and DG4 procedures.

3.2 Start Time Determination

The outage commences when the first customer contacts the contact centre (as per current methodology).

3.3 End Time Determination

The outage is deemed to be fully recovered on the turning of the isolation valve. Although it is acknowledged that, on occasions, there will be a slight lag between the valve operation and all properties having their supply restored, in the majority of cases the opening of the main supplying valve will result in the end of an interruption.

Note: The time on the customer's warning card is used to determine whether or not a planned and warned interruption overruns. It is not used to determine the End Time.

3.4 Duration

The duration is the length of time for which customers are without a continuous supply of water. An interruption starts when water is unavailable from the first cold tap in a property and finishes when the supply to the last property affected by the interruption is restored to the tap.

3.5 Planned Interruption Duration Determination

When calculating the duration of a planned interruption, the Start Time is taken as the time when the valve is turned off and the End Time is taken as the time when the valve is turned on (plus an allowance for mains charging if this is deemed to be necessary). This ensures that reporting is in line with the regulatory definition below:-

'Duration is defined as the length of time for which customers are without a continuous supply of water. **An interruption starts when water is unavailable from the first cold tap in a property and finishes when the supply is restored to the tap.**'

If a planned and warned interruption commences before the Planned Start Time, the interruption is re-categorised as an unplanned interruption.

If a planned and warned interruption commences after the Planned Start Time, the time between the planned start and actual start is not included in the duration.

If a planned and warned interruption finishes before the Planned End Time, the time between the actual end and planned end is not included in the duration.

If a planned and warned interruption finishes after the Planned End Time, the interruption is re-categorised as an unplanned interruption (overrun of a planned interruption).

3.6 Event

Event is the term used by NI Water to describe its involvement in an abnormal occurrence in its services to customers.

3.7 Planned & Warned Interruption

This is where notice of an interruption (> 3 Hours) is provided to properties affected at least 48 hours in advance of the beginning of the interruption.

3.8 Unplanned/Unwarned Interruption

This is when an unplanned or a planned and unwarned interruption to supply occurs. Properties receiving less than 48 hours' notice of a planned interruption (> 3hrs) are to be counted as 'unplanned' and reported under this category. Any planned interruption that is started before the planned date and time contained in the warning notice, whether this occurs within a 48 hour warning period or not, is also to be re-categorised as 'unplanned'.

3.9 Overruns

When a planned and warned interruption continues beyond the end of the warned time, for whatever reason and whether or not a customer has been advised during the shutdown that an overrun is going to occur, the interruption is described as an overrun and is reported separately.

3.10 Third party interruption

A third party is defined as anyone who does not act for, or on behalf of NI Water. This category is intended to cover damage to NI Water's mains or other equipment that directly or indirectly results in an unplanned loss of supply to enable the damage to be repaired. Where a third party interruption is not caused by a third party, but repair may be delayed by a third party, for example when a gas main runs close to a water main and needs to be isolated, the whole of the duration on the interruption must be reported as an unplanned interruption. Companies can describe this event in their commentary.

3.11 Electrical Failures

Interruptions to supply caused by electricity supply failures must be reported as unplanned, unwarned interruptions, and identified in the records as caused by electrical failure to enable the details to be included in the NIAUR Return commentary.

3.12 Properties affected by more than one interruption during report year

Properties, which are affected by more than one interruption during the report year, should be reported separately for each interruption. This means, for example, that a property affected by three supply interruptions would be reported three times, once for each interruption. Where properties are affected by repeat interruptions on the same day, these should only be counted separately where there is a minimum of one hour between the interruptions for the supply to be available (e.g. to refill storage tanks). When shorter gaps occur, the duration is counted from the start of the first interruption until the last restoration of supply.

4.0 PROCEDURE

It should be established before any work is carried out on site, which function is responsible for the collection of information for the interruption record. In general, whichever function

operates the valves to cut off supply at the site of an interruption is also responsible for the collection and ownership of the information.

4.1 Planned Interruptions (lasting > 3 Hours)

Planned interruptions to supply arise as a result of work being carried out by different functions within the Customer Service Delivery Directorate or by functions within other NI Water Directorates. These have been identified as follows:

- Planned interruptions carried out by Networks Water,
- Planned interruptions carried out by Leakage Services,
- Planned interruptions carried out by Capital Asset Delivery and,
- Planned interruptions carried out by Customer Field Services.

Regardless of the source of the interruption to supply, all planned interruptions must follow the procedures for giving the appropriate warnings. Each function is responsible for collecting and recording all appropriate information to be included in the DG3 Interruptions to Supply Register.

All affected properties must be notified by letter, or card drop, at least 48 hours before the shutdown, notifying them of the planned times and dates of shutdown and the restoration of supply. A minimum of 48 hours warning must be given for planned interruptions greater than 3 hours. The start of the warning occurs when the last card has been delivered or the last letter sent to the properties affected. If for example, there is estimated to be 500 properties to be warned, the card drop operation starts at 9.00am on 2nd July and finishes at say 2.00pm, then the warning period starts at 2.00pm for 48 hours and work should not start on site on the planned interruption until 2.00pm on the 4th July.

A copy of the letter of notification or the information contained on the card used in the card drop should be sent to the following for information – Customer Relations Centre Front Desk, Work Planning Unit, Telemetry Control Centre, Functional Manager and relevant Northern Ireland Fire and Rescue Service. For contact details see Appendix A.

The number of properties affected by a planned interruption should be determined by the most accurate means available at the time of:

a) planning activity;
b) the interruption; or
c) any subsequent more detailed investigation.

At the time of the initial assessment this is likely to be by property count or an estimate based on local knowledge. For recommendation for estimating numbers of properties, see paragraph 5.3.

4.2 Planned interruptions carried out by Networks Water or Leakage Services

Field staff on site are to record all information on a paper pro forma, known as an Interruption Record Sheet (see Appendix D). The pro forma contains the raw data associated with the interruption and is retained for audit purposes. The information is also communicated to the Work Control Centre (during normal working hours) and the Telemetry Control Centre (outside normal working hours) where staff will already have opened an event on the Central Incident Management System (CIMS) and will use the information to update/populate the remaining fields associated with the event.

During the course of an interruption, field staff will continue to provide the WCC or TCC with regular updates on progress and the CIMS event details will be updated accordingly. When the interruption has ended, the CIMS event record will be closed with a status of 'Closed – DG3 Record Required' and the Field Manager responsible will review the details with the Field Technician and amend the information as necessary.

The following fields of information are required to enable a CIMS Planned Interruption Event to be created:

- Cause
- Warning details
- Planned start / finish
- Public narrative
- Incident location / areas affected

The following CIMS fields should be updated during the course of a planned interruption event:

- Estimated restoration time / date
- Actual restoration time / date
- Water sampler contacted
- Public narrative

4.3 Planned interruptions carried out by Capital Asset Delivery or Customer Field Services

Capital Asset Delivery and Customer Field Services use a combination of a paper pro forma (Appendix D) and an MS Excel spreadsheet template, known as a Contractor Return Sheet, to record the details of interruptions as the contractors that carry out the work for these departments do not have access to CIMS. Each month, an appropriate member of Capital Asset Delivery or Customer Field Services will sign off the information to be recorded retrospectively on CIMS. Details of the spreadsheet template can currently be obtained from CSD Services in Capital House.

CIMS planned interruption events relating to Capital Asset Delivery should be created by Capital Asset Delivery staff in advance of planned interruptions taking place on site. The Warning Issued Date and Time, Planned Start Date and Time, Planned Restoration Date and Time, cause of interruption and properties affected are the only details that can be input in advance. This information will be used by staff in the CRC when providing updates to customers.

During the interruption, the contractor will record the details of the interruption, including the Actual Start Date and Time and Actual Restoration Date and Time, on an Interruption Record Sheet. The contractor will also summarise the information from the Interruption Record Sheets for each month in a Contractor Return Sheet. Contractor Return Sheets will be forwarded to Capital Asset Delivery staff who will use the details to update the CIMS interruption event records. This task will be completed both monthly and retrospectively. A copy of the Contractor Return Sheets is also to be forwarded to CSD Services for incorporation in the monthly DG3 Composite Report.

4.4 Procedure for Ensuring that Customers Receive Adequate Notification in the Event of Planned and Warned Interruptions

Reference: The Water Mains Rehabilitation Framework Northern Ireland Guidance Note (GN07) - DG3 Interruptions Reporting for CIMS October 2016

For a planned interruption to be classed as planned and warned, customers must be provided with at least 48 hours' notice in advance of the interruption to the water supply at their property. Therefore, if it is the Company's intention to interrupt the supply at 12 Main Street from 8am to 6pm on 8th June, the warning must be communicated no later than 8am on 6th June.

Contractors have a contractual requirement to provide customers with 48 hours' notice in advance of supply interruptions.

Guidance Note *GN7* provides detailed and comprehensive guidance on the required action to be taken by contractors in relation to the notification of customers of the planned intent to interrupt the water supply. The guidance note defines the roles, responsibilities, notification periods and procedures for planned and unplanned interruptions during and after normal working hours.

Contractors should ensure familiarity and compliance with the guidance note at all times.

Formal on-site verification process to ensure customers are receiving the minimum 48 hour notification

Each month, NI Water's WMRF Clerk of Works (CoW) will attend two notification card drops for each contractor, to witness the start of the notification period, i.e. when the last card/letter has been delivered.

The CoW will provide formal confirmation to NI Water's Asset Delivery DG3 Compliance Team of when the last notification was delivered prior to the start of the planned interruption.

The monthly audits carried out by the CoW will be collated into a report to be reviewed at quarterly WMRF Project Board meetings.

Any instances of failure to provide the minimum 48 hours' written notification will result in the following:

- the interruption will be designated and reported as 'unplanned'
- the contractor concerned will receive a formal written warning and a non-conformance report (NCR) will be issued which could impact on reduced work allocation going forward
- NI Water's Executive Committee will be advised of any failures.

4.5 Unplanned Interruptions carried out by Networks Water or Leakage Services

The event trigger for a CIMS unplanned interruption event to be created is 4 'no water' complaints in a single DMA within an hour, or when the WCC/TCC is informed by the Field Technician that the water is being turned off.

As defined above, unpredicted events such as mains bursts, or interruptions that are planned but where customers are not warned at least 48 hours in advance, are classified as unplanned interruptions.

Unplanned interruptions are mainly the responsibility of the Networks Water function and information should be recorded using CIMS.

Following receipt of a 'No water/Burst main' complaint the Field Manager will investigate as soon as possible and provide 'status updates' to the Work Control Centre on the progress

of remedial works. The Field Technicians on site will record all information on a paper pro forma (Appendix D) and the pro forma will be retained for audit purposes. The Field Technicians will also provide regular timely updates on the progress of such events to the Work Controllers, Duty Managers and Telemetry Operators. Details including the cause of interruption, the time the repair is commenced, the estimated restoration time and the time the repair is complete are to be recorded on CIMS.

Area Managers may be made aware of interruptions other than as a result of customer calls. In such cases, the Field Managers should ensure that relevant details are passed to the WCC for processing.

Details input to CIMS are to include the Interruption Start Time, as noted by the first affected customer, the time at which the supply was restored and whether or not a third party or an electrical supply failure was the cause.

The following fields of information are required to enable a CIMS Unplanned Interruption Event to be created:

- Time of first call
- Estimated restoration time
- Public narrative
- Incident location / areas affected

The following CIMS fields should be updated during the course of an unplanned interruption event:

- Public narrative
- Cause
- Mains type / material
- Repair commenced date / time
- Supply restored date / time
- All properties restored date / time
- Water sampler

Note: A record should be created for every burst main, even if the properties affected are zero as there is a requirement to record all bursts on DG3.

4.6 Unplanned interruptions carried out by Capital Asset Delivery or Customer Field Services

CIMS unplanned interruption events relating to Capital Asset Delivery are created by WCC and TCC staff in the same way that other CIMS unplanned interruption events are created. Sometimes, the contractor may be unaware that an unplanned interruption has occurred, for example, if the contractor forgets to open a valve. The CIMS process ensures that such interruptions are captured by the Company. In cases where the contractor is aware of having caused an unplanned interruption, for example, a burst main, the contractor will provide details of the interruption in the Contractor Return Sheet.

4.7 Number of properties affected

An estimation using practical evaluation and contouring from NIW's GIS system will be used to give a more accurate estimate of drawdown of the system.

5.0 RECORDS

Overall responsibility for DG3 records lies with the Head of Networks Water. However, the DG3 Register is compiled and held by CSD Services in Capital House.

Interruption records relating to the Networks Water and Leakage Services functions are recorded on CIMS. Interruption records relating to Capital Asset Delivery and Customer Field Services are also recorded on CIMS but on a retrospective basis. As Capital Asset Delivery and CFS contractors do not have access to CIMS, their details are initially recorded on an MS Excel spreadsheet template before being entered onto CIMS by NI Water staff.

5.1 Interruption Recording using CIMS

When an event is created on CIMS, the event can be one of the following:

- Unplanned Interruption
- Planned Interruption
- Flooding
- Water Quality

CIMS can be used to specify whether or not:

- an Unplanned Interruption event was caused by a third party
- a warning was issued for a Planned Interruption event
- the amount of warning was sufficient for a Planned Interruption event
- a Planned interruption event occurred during the planned time

In this way, CIMS can be used to report on all four regulatory categories of interruption.

When all information has been entered onto CIMS, the information is then extracted in the form of a report. A number of reports are available for selection including:

- RPT1151 – Historical DG3 Interruption Records Report,
- RPT1152 – Historical DG3 Interruption Addresses Report,
- RPT1155 – 'Live' DG3 Unplanned Interruption Records Report
- RPT1156 – 'Live' DG3 Planned Interruption Records Report.

When a CIMS interruption event record has been created and closed with the status of 'Closed – DG3 Record Required', it is then the responsibility of the Field Manager to review the record and to amend the details according to the information provided by the Field Technician and information obtained through the GIS polygon process. Once the Field Manager is satisfied that all amendments have been made, the record should be approved and passed to the Customer Field Manager for review and approval. The record should then be passed to the Area Manager for review and approval, to the DG3 Customer Services Coordinator for review and approval and finally, to the Head of Networks Water for review and approval. If the CFM, AM, DG3 CS Coordinator or HoF find any issues with the information, they have the option to reject the record.

Most of the information required will be able to be input directly onto the input screen and will probably not be altered. Some information e.g. house numbers and addresses will be initially estimated by the Field Technicians or the Field Manager. However more investigative work may be required to give an accurate number of houses. The interruption record can then be updated when this information becomes available. For procedures for obtaining house numbers and address see paragraph 5.3 below.

Area Managers and Field Managers are to ensure that all relevant details are recorded and input to the system as soon as possible, and any paper records or notification cards are retained for general audit purposes.
On-call staff are to gather all relevant information and report to the Networks Water Area Manager as soon as possible the next working day.

The following Audit Process is aimed at ensuring the timely completion of audit tasks and approval ahead of monthly reporting on DG3 to the Board.

DG3 / CIMS Reporting / Audit Process (3rd Draft – 21 Oct 14)

Action No.	Action	Date
CIMS Report from the Field		
1	• WC opens a New Event in CIMS when an event trigger is reached. • The CIMS Event is updated by WC throughout the incident with information from Field Staff. • WC Save the event when the incident is closed in the field.	
2	• DG3 CS Coordinator sends the ***Weekly Rapid No Water Complaints Report*** to the FM's on a Monday morning for the previous week.	Every Monday morning.
3	• The weekly ***Rapid No Water Complaints Report***, lists all NIW No Water calls for the week. • FM filters the report for his own area, sorts by date and DMA which then group calls. • The FM opens the CIMS / Reports / ***RPT1151 – Historical Report – DG3 Interruption Records.*** o Enter Start Date. o Remove tick from Null box. o Enter End Date o View Report. o Click Export Drop Down Menu o Export to Excel o Filter Report to own area. • The call groups are then checked against an ***appropriate DG3 Interruption Record*** and the Technicians, ***Interruption to Supply – Site Record***. • From the three reports the FM then adjusts, if required, and **Save** the CIMS Report. • At this stage **don't Approve** to allow the event to remain with the FM until all audit checks are completed at the end of the month.	Ongoing throughout the week/month.
4	• The above process will be completed for each week of the month. • L4 will also check the CIMS Event Report throughout the Month and raise queries as appropriate.	Ongoing throughout the week/month.
DG3 Reporting and Audit Process		
5	• DG3 CS Coordinator produces Draft DG3 KIP Report, ***DG3 Reporting – 081014.*** • Two tabs; o ***Unplanned >6hr Summary*** o ***AIR & KPI Reporting***	By 1st working day of the new month.

6	• Level 4 uses the above monthly ***Unplanned >6hrs Summary*** Report to identify a number of L4 Monthly Audit checks. • L4 meets with the Customer Field Manager to arrange the Audit Checks.	1st working day + 1 day. 1st working day + 1 day
7	• Level 5 checks the monthly ***Unplanned >6hr Summary*** report for his area against CIMS Events and adjusts as necessary.	1st working day + 1 day
8	• Customer FM discusses the CIMS Events highlighted for audit in action 6. • Adjusts as required.	1st working day + 3 days
9	• Customer FM reports back to Level 4. • L4 approves/saves the Audit Events in the CIMS system.	1st working day + 5 days
Monthly Sign Off		
10	• L4 emails L3 & DG3 CS Coordinator that Monthly Audit checks have been completed.	1st working day + 7 days
11	• DG3 CS Coordinator produces ***DG3 Rapid Comparison Checks*** report. • This Zip file contains an number of reports; o Individual FM folders with DG3 ID Events checks. o Comparison Checks Summary. ▪ Red/Amber/Green against start/finish/No. prop o Properties not recorded on CIMS. ▪ Used to check No. of prop queries.	1st working day + 8 days
12	• L4 discusses above report with Customer FM. • Customer FM discussed above report with FM's. • Customer FM to the Level 4. • L4 reports back to DG3 CS Coordinator.	1st working day + 10 days
13	Level 3 sings off the monthly DG3 Report for the Board.	2nd Tuesday of the new month.

The reports above can be found at G:\NetWat\DG3\Monthly Audit Process

5.2 MS Excel Spreadsheet Template – Contractor Return Sheet

Planned interruptions undertaken by Capital Asset Delivery and Customer Field Services will most likely be carried out by a number of contractors. The Contractor's Representative should gather all appropriate information on a paper pro forma (Appendix D) and then transfer this information to the Contractor Return Sheet. The Contractor Return Sheets should be collated at the end of each week/month and signed off by an appropriate member of Capital Asset Delivery or Customer Field Services staff and sent to CSD Services for

inclusion into the DG3 Register. All pro forma should be stored by Capital Asset Delivery and Customer Field Services for Audit purposes.

Details of the Contractor Return Sheet can currently be obtained from CSD Services in Capital House.

5.3 Property numbers and Addresses

It is a requirement of NIAUR that the numbers of properties and address details of properties affected by interruptions to supply exceeding 3 hours are recorded. The numbers of properties and address details should be determined by the most accurate means available at the time. This is likely to be by one of two methods.

a. Visual Property Counts

In the case of small-scale interruptions, a Field Technician may have sufficient knowledge to determine the number of properties affected by carrying out a visual property count. Details should initially be recorded by hand on a paper pro forma including location, type and cause of interruption, and 'valve off'/'valve on' times. Each week, the Field Manager should review the Interruption Record Sheets with his Field Technicians and the details provided should be used to update the CIMS records.

b. GIS Polygons

In the case of large-scale interruptions, the number of properties affected by an interruption should be determined using a GIS polygon. A Map Redline Request should be submitted using the CIMS DG3 Interruption Details page. Then in CARtomap (the Company's Corporate Asset Register/GIS intranet facility), a redline polygon should be drawn around the affected area and assigned to the CIMS request which should appear in the dropdown list associated with the DG3 Areas Layer of the Water workspace (see Editing Menu). Back in CIMS, the Map Redline Request should be updated to retrieve the address details of the properties within the polygon and hence, the number of properties affected.

Field Managers should base the redline polygons on the details provided by the Field Technicians.

In the case of interruptions where rezoning is carried out, it may be necessary to obtain address details from within more than one polygon.

5.4 Records of Interruptions

In general all interruptions to supply should be recorded. However there are large numbers of very short interruptions to supply carried out by Leakage Services and Customer Field Services. These interruptions are routine, inconsequential and last no longer than 30 minutes. Information about these interruptions is held by managers in Leakage Services and Customer Field Services and is therefore not required for the DG3 Interruptions to Supply Register. Discretion should however be used in all cases. If difficulties arise or there happens to be an exception to the type of routine interruption referred to above that gives rise to an interruption that lasts for more than 1 hour then, this interruption should be recorded. Guidance on which interruptions should be recorded is to be given by Leakage Services and Customer Field Services managers.

In general: Routine interruptions lasting less than 1 hour need not be recorded as part of the DG3 Interruptions to Supply Register except at the discretion of the Field Technician or Field Manager.

All interruption records entered onto CIMS are to be approved by at least the Area Manager responsible by the 1st working day + 5 days, as per the Audit Process described earlier in the document. Interruption records belonging to Capital Asset Delivery and Customer Field Services should be sent to CSD Services by the same date.

- When a Field Manager approves a CIMS DG3 record, an e-mail reminder is automatically forwarded to the Customer Field Manager.
- When a CFM approves a CIMS DG3 record, an e-mail reminder is automatically forwarded to the Area Manager.
- When an Area Manager approves a CIMS DG3 record, an e-mail reminder is automatically forwarded to the DG3 Customer Services Coordinator.

Automatic e-mail reminders to approve the DG3 records are sent to the DG3 Customer Services Coordinator, Head of Networks Water, Head of Networks Leakage and Capital Asset Delivery L3 on a monthly basis.

5.5 Historical records

All associated documentation is to be kept for seven years.

5.6 Audit Trail

The maintenance of audit trails is very important. During AIR audits the Reporter would more than likely want to investigate several interruptions and the associated documentation. It is therefore imperative that all records corresponding to individual interruption records, including pro forma, are stored locally for audit purposes.

5.7 Amendments to Information

It is recognised that the details entered at the time a CIMS event record is created are estimates and that it may be necessary to update the details following the GIS polygon process. The CIMS Internal Narrative should be used to record the details of any amendments, over and above those that occur as a result of the normal process of updating records. All amendments to the base data contained in CIMS or information changed during the course of the development of the DG3 Composite Report File, must be supported by a detailed explanation.

6.0 REPORTING

6.1 NI Water Reports

CIMS can be updated on a continuous basis, as and when interruption events occur, throughout the life of an ‘Active’ event, and after an event has been closed on the system and a corresponding DG3 interruption record has been registered. Monthly reports can be generated following the completion of quality assurance checks carried out by Area Managers and Customer Field Managers and the release of data by the Head of Function. These reports are used by the CSD Services function to compile a DG3 Register for each month and corresponding KPIs.

The following reports are generated by CSD Services for Management Information:

- Monthly DG3 Composite Report including monthly DG3 Register
- Monthly DG3 KPI Report
- Annual DG3 AIR Table 2 Lines 5 to 19 Report (as defined by the Annual Information Return Reporting Requirements and Definitions Manual).

6.2 Development of the DG3 Register and KPI Report

As described above, interruption data for each month is extracted from the various data sources (CIMS and Contractor Return Sheets) used by the various work streams (Networks Water, Leakage Services, Capital Asset Delivery and Customer Field Services) and copied to a DG3 Composite Report File held by CSD Services in Capital House.

Copies of the original records are retained in their unaltered state. The records are then sorted according to the four regulatory categories of interruption:

- Unplanned Interruptions
- Planned and Warned Interruptions
- Unplanned Interruptions Caused by Third Parties
- Unplanned Interruptions due to Overruns of Planned and warned Interruptions

further sorted according to the four regulatory time bands:

- More than 3 hours
- More than 6 hours
- More than 12hours
- More than 24 hours

The interruption records are subject to a series of audit checks to ensure that the details of interruptions have been captured in accordance to the regulatory guidance. For further information on the development of the DG3 Register, please refer to the Line Methodology for AIR Table 2 Lines 5 to 19.

6.3 Regulatory Report

The Finance & Regulation Directorate will report to Northern Ireland Authority for the Utility Regulation (NIAUR) on an annual basis.

7.0 VOID PROPERTIES

Within NI Water, Asset Information Development (AID) is primarily responsible for ensuring the databases, systems, standards and processes are in place to support the Corporate Asset Register (GIS/Ellipse).

According to the definition, a void property is a type of connected property. The GIS picks up the following twelve property types, including void properties:

- Approved Built
- Approved Derelict
- Approved Under Construction
- Candidate Built
- Candidate None
- Candidate Under Construction
- Historical Built
- Historical Derelict
- Historical None
- Historical Under Construction
- Provisional Built
- Provisional Under Construction

Unless AID is specifically asked to exclude void properties when running queries, their GIS address lists will include any of the property types listed above.

There is a delay in updating the GIS with property status information.

Relevant extracts from the Pointer 2.1 Specification can be found in Appendix E at the back of this document (Pages 22 to 26 of 31).

8.0 'NO WATER/LOW PRESSURE' COMPLAINTS

Within NI Water, CRC call agents adopt a specific line of questioning with the customer to establish the cause of complaint including complaints relating to low pressure and no water.

A copy of the latest CRC call scripts for handling low pressure/no water complaints can be found in Appendix F at the back of this document (Pages 27 & 28 of 31). Provided the customer provides an accurate response to the questions asked by the call agent, the risk of wrong classification should be negated.

Appendices to the DG3 Supply Interruptions Levels of Service Methodology can be found in the follow section of the document

Appendix A – DG3 Interruption to Supply - Roles & Responsibilities

Customer Relations Centre (Normal Hours)

- Log 'no water'/ 'burst main' complaints into RapidXtra system;
- Use CIMS system to provide up to date information to customers;
- Use 'Operational Announcements' functionality to share information;
- Adhere to agreed communication routes.

Work Control Centre (Normal Hours)

- Create CIMS interruption event records and close with either a status of 'Closed – DG3 Record Required' or 'Closed – DG3 Record Nor Required'.

Work Planning Units

- Normal hours – create a Work Order and inform area supervisor immediately;
- Update the Ellipse System following 'status calls';
- Ensure Work Orders are closed out.

Contact details:-
North West – [redacted]
South East – [redacted]

Customer Service Delivery Directorate - Networks Water

- The Area Managers and Field Managers are responsible for the procurement of information for DG3 within the Networks Water function.

Customer Service Delivery Directorate - Leakage Services

- The Area Managers and Field Managers are responsible for the procurement of information for DG3 within the Leakage Services function.

Customer Field Services

- Customer Field Services is responsible for reactive meter maintenance, proactive meter exchange and the installation of new meters. An interruption to supply to the property arises during the course of the installation.

Field Technicians

- Proactively provide regular timely updates on the progress of events (bursts, repairs etc.) to Work Control / Duty Managers / Telemetry operators:
  - Nature of the problem and any relevant details
  - Time repair commenced
  - Estimated restoration time
  - Repair complete;

Field Technicians (continued)

- Provide any additional information to Field Managers to allow completion of the corresponding DG3 record e.g.
  - Polygon details
  - Rezoned properties.

Field Managers

- Inform Customer Services and Work Planners of planned interruptions providing details of area & number of properties affected and proposed duration of interruption;
- Assess extent of unplanned interruptions and organise remedial work;

- Inform Work Planners on completion of remedial work;
- Provide supporting information on number of properties affected and reasons for interruption.
- Ensure Field staff are adhering to agreed processes and communication routes;
- Review records created by Work Controllers:
  - Ensure start / finish times are accurate
  - Ensure property data is accurate & required fields complete;
- Review corresponding DG3 record for each event;
- Draw polygons, where required, and automatically link to CIMS record;
- Sign off DG3 record for submission for approval by Customer Field Manager;
- Update Major Incident records.

Customer Field Managers

- Ensure Field Managers are adhering to the agreed process / timescales;
- Check / query records signed off by Field Managers;
- Sign off DG3 Record for approval by Area Manager.

Area Managers

- Ensure Customer Field Managers are adhering to the agreed process / timescales;
- Check / query records signed off by Customer Field Managers;
- Sign off DG3 Record for approval by Area Manager.

Telemetry Control Centres (Out of Hours)

- Log 'no water'/'burst main' complaints into Work Planning (Ellipse) system;
- Create CIMS interruption event records;
- Inform on call supervisor immediately.

Westland Telemetry Control Centre [redacted]
TCC E-mail Addresses:-
[redacted]

Altnagelvin Telemetry Control Centre [redacted]
TCC E-mail Addresses:-
[redacted]

Work Controllers / Telemetry Operators

- Create and maintain event records based on the information provided by Field Staff:
  - Interruptions to Supply (planned and unplanned)

  - Water Quality;
- Create and maintain event records for planned work;
- Close records at completion of events and apply appropriate DG3 status (required or not required);
- Monitor open incidents for records requiring action;
- Provide advice and guidance, if required, to Bronze users during Major Incidents.

DG3 Customer Services Coordinator

- Processes interruption information from Networks Water, Leakage Services, Capital Asset Delivery and Customer Field Services;
- Checks, audits and queries records signed off by Customer Field Managers;
- Compiles DG3 Interruptions to Supply Register based on data derived from CIMS;
- Signs off CIMS records and DG3 Interruptions to Supply Register for approval by Head of Networks Water;
- Produces KPI reports for Management and AIR for Regulator.

Capital Asset Delivery

- Capital Asset Delivery is responsible for the rehabilitation of existing water mains and the installation of new water mains. Interruptions to supply arise as a result of connecting properties to the refurbished and new water mains.

Capital Asset Delivery Planned Works Coordinator

- Ensure that planned works affected > x properties / lasting > x time are entered on the system in advance;
- Ensure that planned works are updated if necessary (e.g. overruns, early starts);
- Close records at completion of events and apply appropriate DG3 status (required or not required);
- Ensure that planned works affecting < x properties / lasting < x time are entered on the system retrospectively and submitted for approval.

Networks - On-call Staff

- Assess extent of unplanned interruptions, update Duty Officer (if required) and organise remedial work
- Inform Networks Water Area Manager of actions taken and interruption details

Head of Networks Water

- Final signoff of amalgamated approved CIMS interruption records on a monthly basis and release of data for reporting purposes.

Regulation & Business Performance Section

- Submit Annual Information Return to NIAUR.

Emergency Planning Team

- Declare Major Incidents on the CIMS system;
- Interrogate reports to provide status updates as incidents develop;
- Complete Upwards Reports based on data provided in CIMS;
- Close Major Incidents on CIMS system.

Bronze Team – MIP Only

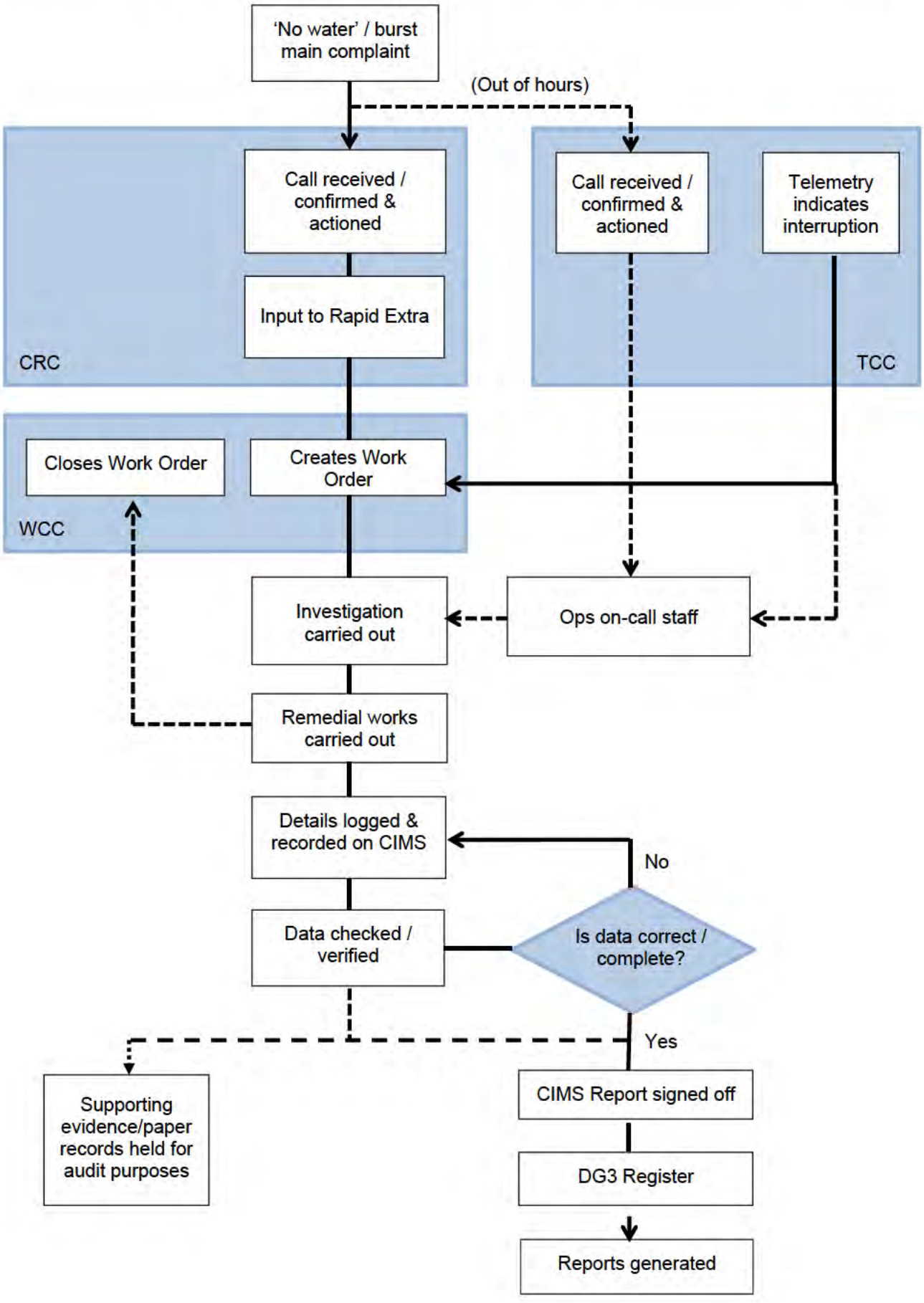
- Create and maintain event records based on the information provided by Field Staff:
  - Interruptions to Supply (planned and unplanned)

    - Water Quality
    - Flooding;
- Close records at completion of events and apply appropriate DG3 status (required or not required);
- Monitor open incidents for records requiring action;
- Interrogate reports to provide status updates as incidents develop within their Bronze area.

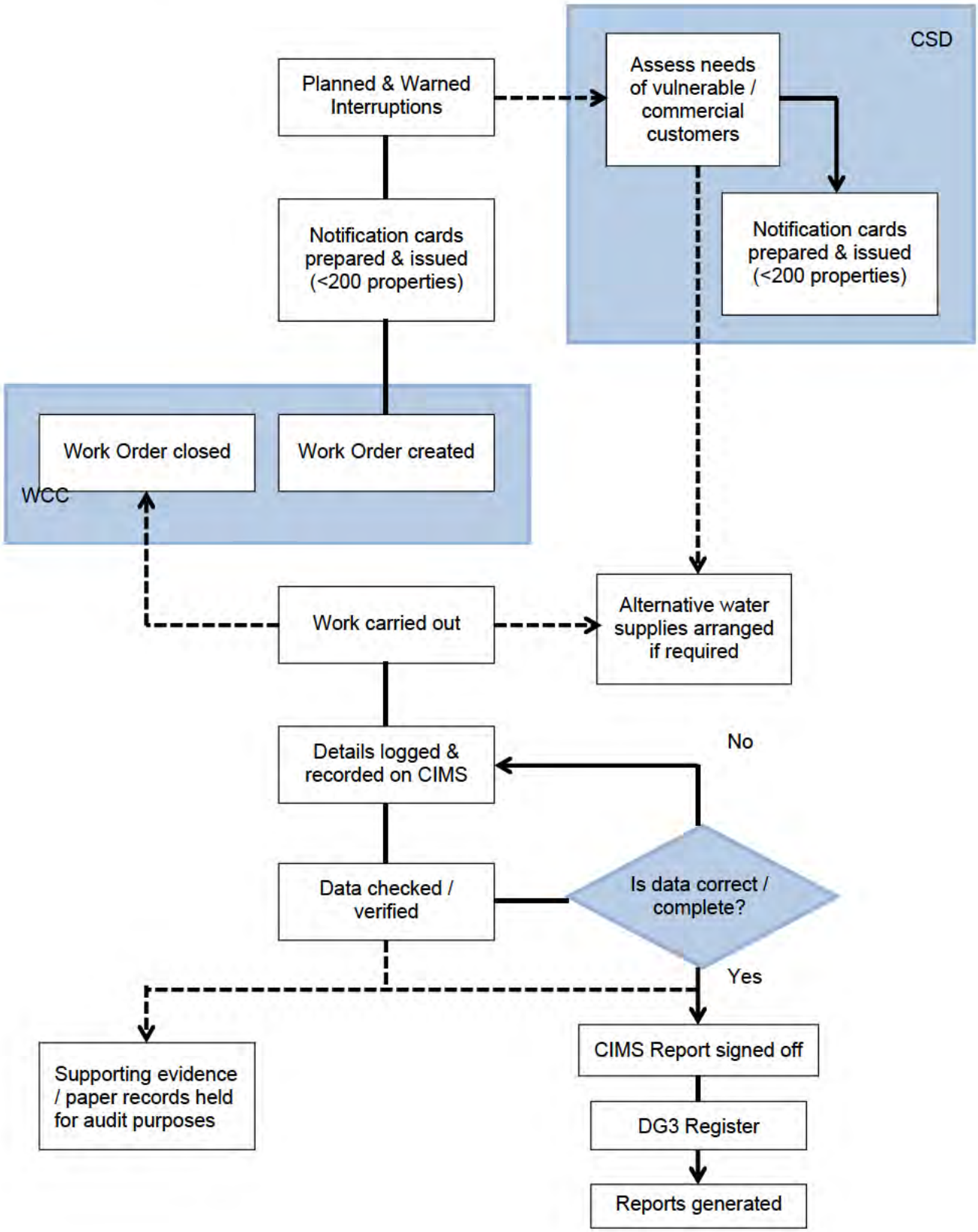
Silver Team

- Interrogate reports to provide status updates as incidents develop.

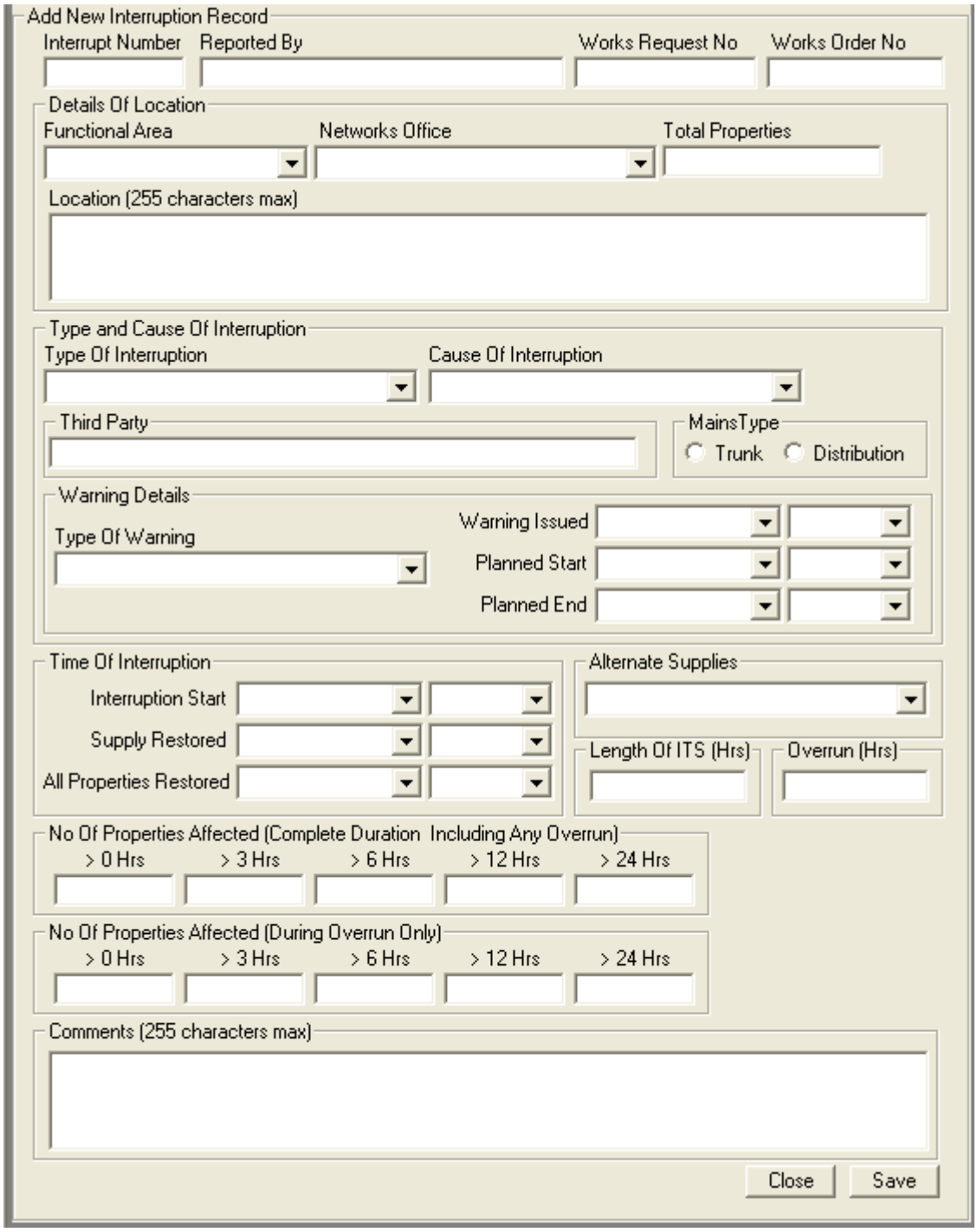
Appendix B – DG3 Process Flow Diagram – Unplanned or Unwarned Interruptions



Appendix B – DG3 Process Flow Diagram – Planned and Warned Interruptions



Appendix D – Pro forma - Interruption Record Sheet



Appendix E – Pointer 2.1 Specification Extract (Page 12)

4.21 BUILDING_STATUS

Definition
The current physical status of the building.

Constraints
Population of this field is mandatory.

Permitted PAO Status values are:

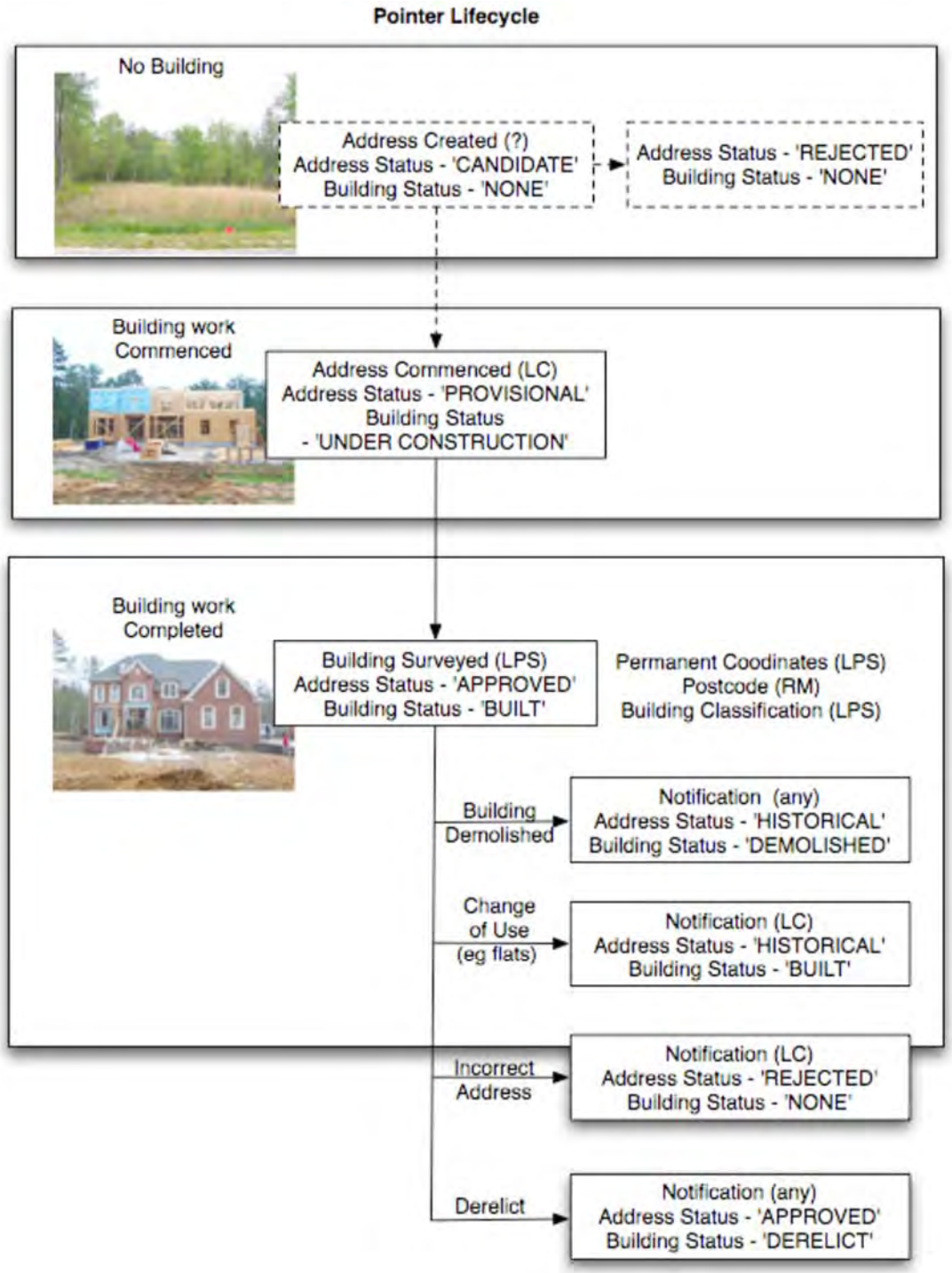
None, Under Construction, Built, Derelict and Demolished

Details
This field reflects changes to the Building_Status.

The values in this field are system generated and when a new address sent in from a council is entered in the system, the Building_Status is set to ‘None’ and the Address_Status set to ‘Candidate’. When the council sends notification that building has commenced, the Building_Status is set to ‘Under Construction’ and the Address_Status set to ‘Provisional’. After LPS field surveyors have confirmed the exact co-ordinates for the building, the Temp_Coords field is updated and the Building_Status is set to ‘Built’ and the Address_Status set to ‘Approved’. A notification from a council that a building is derelict or demolished results in the Building_Status being updated and the Address_Status set to ‘Historical’.

Please note that depending on the purpose for which the data is being used, the user may need to filter out certain categories of Building _Status. For example, addresses for ‘Demolished’ buildings would not be required where a mail shot is planned.

Appendix E – Pointer 2.1 Specification Extract (Page 13)



Appendix E – Pointer 2.1 Specification Extract (Page 14)

4.22 ADDRESS_STATUS

Definition
The current logical status of the address.

Constraints
Permitted ADDRESS_STATUS values are: (See diagram above)

- Candidate - before building starts. Planning permission has been granted but building has not commenced. Created by the Local Council before building has begun.
- Provisional – The Local Council has confirmed that the building is under construction.
- Approved – LPS add permanent co-ordinates and/or a building classification. A Postcode may also be added however this does not affect the ADDRESS_STATUS
- Historical - addresses that are no longer in use due to dereliction, demolition etc.
- Rejected – used to indicate the deletion of an incorrect address. Population of this field is mandatory, and is system generated.

Details
The values in this field are system generated and when a new address sent in from a council is entered in the system, the Building_Status is set to ‘None’ and the Address_Status set to ‘Candidate’. When the council sends notification that building has commenced, the Building_Status is set to ‘Under Construction’ and the Address_Status set to ‘Provisional’. After LPS field surveyors have confirmed the exact co-ordinates for the building, the Temp_Coords field is updated and the Building_Status is set to ‘Built’ and the Address_Status set to ‘Approved’. A notification from a council that a building is derelict or demolished results in the Building_Status being updated and the Address_Status set to ‘Historical’.

Please note that depending on the purpose for which the data is being used, the data should be filtered on the categories of Address _Status. For example, addresses set to ‘Historical’ would not be required where a mail shot is planned.

4.23 CLASSIFICATION

Definition
The current use of the building, derived from the LPS classification.

Constraints
Data in this field is system generated.

Permitted CLASSIFICATION values are shown below. These are derived from the detailed LPS list of valuation classifications.

Details
There are three main classification groups:

- NULL – Where the record has not yet been updated with an LPS classification.
- Non Domestic (formerly Commercial) – these records are prefixed with 'ND'
- Domestic (formerly Residential) – these records are prefixed with 'DO'. Where an individual is operating a business from a room within their home, LPS still classify this as a Residential property.

These are subdivided into a further classification as detailed above.

When the building use of an addressable object changes, the CLASSIFICATION field will be updated to reflect this change.

Appendix E – Pointer 2.1 Specification Extract (Page 15)

CODE	CLASSIFICATION DESCRIPTION
ND_agriculture	Agriculture (incl farms, market gardens)
ND_agriculture_other	Miscellaneous Agriculture
ND_comm_other	Commercial other
ND_culture	Cultural (incl museums, libraries)
ND_culture_other	Miscellaneous Culture
ND_education	Education (incl school, further ed)
ND_entertainment	Leisure and tourism(non-sporting - cinemas etc)
ND_ents_other	Miscellaneous Entertainment
ND_freight_other	Freight (canal, dock, railway undertaking)
ND_health	Health(incl hospital, care home, clinics)
ND_hospitality	Hospitality (incl hotels, b&b)
ND_indust_other	Miscellaneous Industry
ND_industry	Industry (incl factory, quarries)
ND_legal	Law and Order
ND_office	Commercial office - banks, post offices, offices
ND_religious	Religious establishment (incl places of worship)
ND_retail	Retail (shops, showrooms etc)
ND_sporting	Recreation (sports facilities)
ND_utilities	Public utilities
ND_utilities_other	Miscellaneous Utilities
DO_apart	Domestic - Apartments/flats
DO_detached	Domestic - detached
DO_semi	Domestic - Semi
DO_terrace	Domestic - Terrace
DO_other	Domestic other (incl Lock-up garages)

4.24 CREATION_DATE

Definition
The date when an address is first entered into the system by the Local Council.

Constraints
This field will only be populated for records created after the Pointer application went live in 2005. The field is automatically populated when records are entered into the database. It does not necessarily relate to the date of building, but rather when the information was provided.

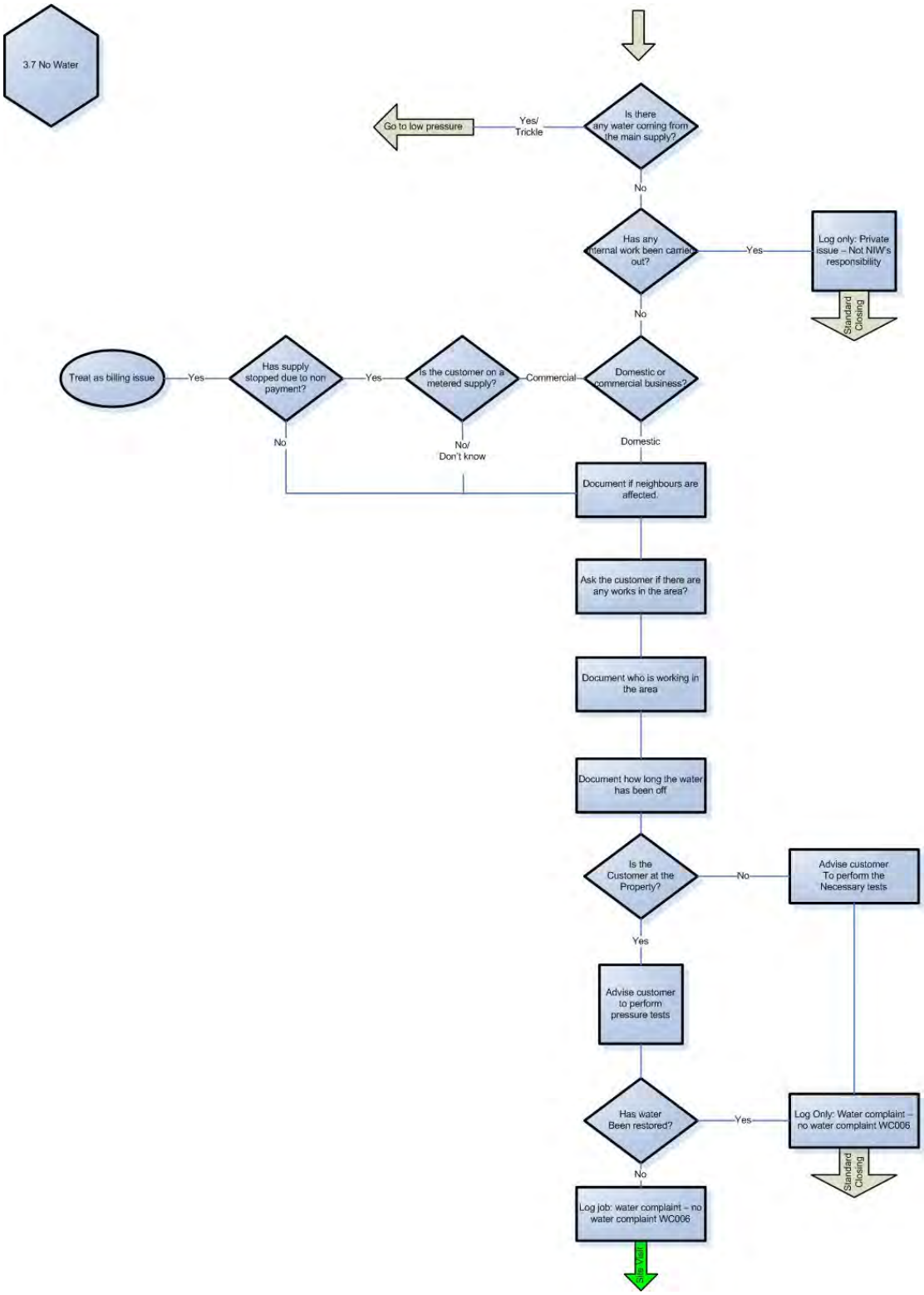
4.25 COMMENCEMENT_DATE

Definition
This is the date when construction on the property has begun.

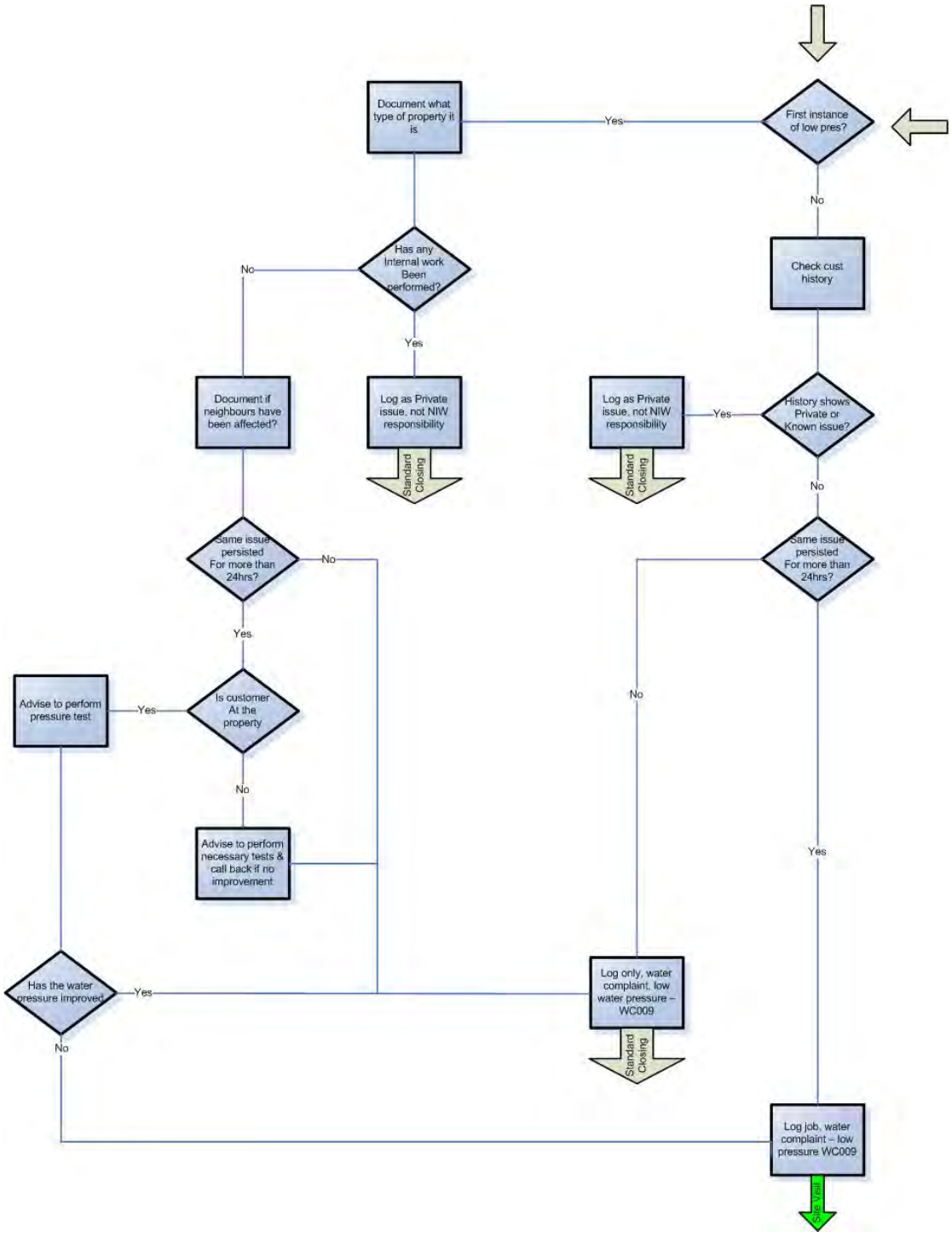
Constraints
This field will be populated for records created after the release of the new Pointer Product and when Local Council informs Pointer of the fact.

Details
This indicates when the BUILDING_STATUS changes from ‘NONE’ to ‘UNDER CONSTRUCTION’

Appendix F – CRC Call Script for 'No Water' Complaints



Appendix F – CRC Call Script for 'Low Pressure' Complaints



Appendix G – DG3 Register Extract *(Unplanned Interruption Events – CIMS Report RPT1184)*

LastRun
24/04/2017 10 01

Unplanned, Unwarned Interruptions

More than 3 hrs **No of Properties** **6,740**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description
139445	108243	Submitted to Customer Field Manager	Networks Water	NW03A	[redacted]		Unplanned Interruption		N/A			01/03/2017 09 22	01/03/2017 12 30	73	73	73	0	0	0	3 Hrs 8 Mins 0 Secs	3	8	0	(UPRN 185584748) - [redacted]	FALSE			Pump Equipment Failure
139568	108332	Registered	Networks Water	NW03D			Unplanned Interruption		N/A			11/03/2017 12 30	11/03/2017 15 40	16	16	16	0	0	0	3 Hrs 10 Mins 0 Secs	3	10	0	(UPRN 185918737) - [redacted]	FALSE			Burst Main/Main Repair
139609	108367	Submitted to Customer Field Manager	Networks Water	NW52A			Unplanned Interruption		N/A			15/03/2017 19 00	15/03/2017 22 10	29	29	29	0	0	0	3 Hrs 10 Mins 0 Secs	3	10	0	(UPRN 185427880) - [redacted]	FALSE			Burst Main/Main Repair
139629	108386	Registered	Networks Water	NW53A			Unplanned Interruption		N/A			20/03/2017 10 20	20/03/2017 13 30	27	27	27	0	0	0	3 Hrs 10 Mins 0 Secs	3	10	0	(UPRN 185796596) - [redacted]	FALSE			Burst Main/Main Repair
159687	118421	Submitted to Area Manager	Networks Water	NW53A			Unplanned Interruption		N/A			25/03/2017 10 50	25/03/2017 14 00	51	47	47	0	0	0	3 Hrs 10 Mins 0 Secs	3	10	0	(UPRN 185915161) - [redacted]	FALSE			Burst Main/Main Repair
159739	118457	Submitted to Customer Field Manager	Networks Water	NW03A			Unplanned Interruption		N/A			30/03/2017 14 35	30/03/2017 17 45	162	162	162	0	0	0	3 Hrs 10 Mins 0 Secs	3	10	0	(UPRN 185612518) - [redacted]	FALSE			Burst Main/Main Repair
139533	108310	Registered	Networks Water	NW03B			Unplanned Interruption		N/A			09/03/2017 09 34	09/03/2017 12 50	12	12	12	0	0	0	3 Hrs 16 Mins 0 Secs	3	16	0	(UPRN 185307467) - [redacted]	FALSE			Burst Main/Main Repair
139553	108321	Registered	Networks Water	NW52B			Unplanned Interruption		N/A			10/03/2017 11 10	10/03/2017 14 30	123	123	123	0	0	0	3 Hrs 20 Mins 0 Secs	3	20	0	(UPRN 185465486) - [redacted]	FALSE			Burst Main/Main Repair
139588	108348	Registered	Networks Water	NW03B			Unplanned Interruption		N/A			13/03/2017 17 00	13/03/2017 20 30	42	42	42	0	0	0	3 Hrs 30 Mins 0 Secs	3	30	0	(UPRN 185329033) - [redacted]	FALSE			Burst Main/Main Repair
159712	118436	Submitted to Area Manager	Networks Water	NW52A			Unplanned Interruption		N/A			28/03/2017 14 23	28/03/2017 17 54	85	85	85	0	0	0	3 Hrs 31 Mins 0 Secs	3	31	0	(UPRN 185432333) - [redacted]	FALSE			Other
139549	108319	Registered	Networks Water	NW03B			Unplanned Interruption		N/A			10/03/2017 09 25	10/03/2017 13 00	13	13	13	0	0	0	3 Hrs 35 Mins 0 Secs	3	35	0	(UPRN 187582220) - [redacted]	FALSE			Burst Main/Main Repair
159694	118600	Submitted to Customer Field Manager	Networks Water	NW02B			Unplanned Interruption		N/A			27/03/2017 10 54	27/03/2017 14 30	17	17	17	0	0	0	3 Hrs 36 Mins 0 Secs	3	36	0	(UPRN 185293792) - [redacted]	FALSE			Burst Main/Main Repair
139518	108297	Submitted to Area Manager	Networks Water	NW53A			Unplanned Interruption		N/A			07/03/2017 17 50	07/03/2017 21 30	141	141	141	0	0	0	3 Hrs 40 Mins 0 Secs	3	40	0	(UPRN 185792538) - [redacted]	FALSE			Burst Main/Main Repair
139489	108267	Submitted to Area Manager	Networks Water	NW52A			Unplanned Interruption		N/A			04/03/2017 17 28	04/03/2017 21 11	30	30	30	0	0	0	3 Hrs 43 Mins 0 Secs	3	43	0	(UPRN 185398644) - [redacted]	FALSE			Burst Main/Main Repair
139624	108383	Registered	Networks Water	NW53A			Unplanned Interruption		N/A			19/03/2017 10 16	19/03/2017 14 00	10	10	10	0	0	0	3 Hrs 44 Mins 0 Secs	3	44	0	(UPRN 185658144) - [redacted]	FALSE			Burst Main/Main Repair
139659	108407	Registered	Networks Water	NW52B			Unplanned Interruption		N/A			23/03/2017 00 30	23/03/2017 04 15	258	258	258	0	0	0	3 Hrs 45 Mins 0 Secs	3	45	0	(UPRN 185694135) - [redacted]	FALSE			Burst Main/Main Repair
139622	108381	Registered	Networks Water	NW03D			Unplanned Interruption		N/A			17/03/2017 17 12	17/03/2017 21 00	67	67	67	0	0	0	3 Hrs 48 Mins 0 Secs	3	48	0	(UPRN 185346029) - [redacted]	FALSE			Burst Main/Main Repair
159765	118466	Registered	Networks Water	NW03B			Unplanned Interruption		N/A			31/03/2017 19 47	31/03/2017 23 45	27	27	27	0	0	0	3 Hrs 58 Mins 0 Secs	3	58	0	(UPRN 185298949) - [redacted]	FALSE			Burst Main/Main Repair
139570	108334	Registered	Networks Water	NW53A			Unplanned Interruption		N/A			12/03/2017 07 40	12/03/2017 11 45	19	19	19	0	0	0	4 Hrs 5 Mins 0 Secs	4	5	0	(UPRN 185999487) - [redacted]	FALSE			Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D			Unplanned Interruption		N/A			01/03/2017 16 50	01/03/2017 21 00	18	18	18	0	0	0	4 Hrs 10 Mins 0 Secs	4	10	0	(UPRN 185345215) - [redacted]	FALSE			Burst Main/Main Repair
139504	108281	Submitted to Customer Field Manager	Networks Water	NW51A			Unplanned Interruption		N/A			06/03/2017 18 40	06/03/2017 22 50	59	59	59	0	0	0	4 Hrs 10 Mins 0 Secs	4	10	0	(UPRN 185931154) - [redacted]	FALSE			Burst Main/Main Repair
139615	108372	Submitted to Customer Field Manager	Networks Water	NW52A			Unplanned Interruption		N/A			16/03/2017 11 00	16/03/2017 15 10	40	40	40	0	0	0	4 Hrs 10 Mins 0 Secs	4	10	0	(UPRN 187413234) - [redacted]	FALSE			Other
139565	108330	Submitted to Customer Field Manager	Networks Water	NW51B			Unplanned Interruption		N/A			11/03/2017 07 36	11/03/2017 11 48	350	350	350	0	0	0	4 Hrs 12 Mins 0 Secs	4	12	0	(UPRN 185679859) - [redacted]	FALSE			Burst Main/Main Repair
139468	108256	Registered	Networks Water	NW01B			Unplanned Interruption		N/A			02/03/2017 15 10	02/03/2017 19 25	35	35	35	0	0	0	4 Hrs 15 Mins 0 Secs	4	15	0	(UPRN 185084091) - [redacted]	FALSE			Burst Main/Main Repair
139651	108396	Registered	Networks Water	NW53A			Unplanned Interruption		N/A			21/03/2017 20 12	22/03/2017 00 30	5	5	5	0	0	0	4 Hrs 18 Mins 0 Secs	4	18	0	(UPRN 185900119) - [redacted]	FALSE			Burst Main/Main Repair
139519	108298	Submitted to Customer Field Manager	Networks Water	NW52B			Unplanned Interruption		N/A			07/03/2017 20 00	08/03/2017 00 20	87	87	87	0	0	0	4 Hrs 20 Mins 0 Secs	4	20	0	(UPRN 185475994) - [redacted]	FALSE			Burst Main/Main Repair
159690	118423	Submitted to Customer Field Manager	Networks Water	NW01A			Unplanned Interruption		N/A			25/03/2017 22 45	26/03/2017 03 10	11	11	11	0	0	0	4 Hrs 25 Mins 0 Secs	4	25	0	(UPRN 185909346) - [redacted]	FALSE			Burst Main/Main Repair
139581	108390	Submitted to Customer Field Manager	Networks Water	NW51B			Unplanned Interruption		N/A			13/03/2017 11 34	13/03/2017 16 00	21	21	21	0	0	0	4 Hrs 26 Mins 0 Secs	4	26	0	(UPRN 185989584) - [redacted]	FALSE			Burst Main/Main Repair
139517	108295	Registered	Networks Water	NW03D			Unplanned Interruption		N/A			07/03/2017 15 00	07/03/2017 19 30	64	64	64	0	0	0	4 Hrs 30 Mins 0 Secs	4	30	0	(UPRN 185918324) - [redacted]	FALSE			Burst Main/Main Repair
159746	118458	Submitted to Area Manager	Networks Water	NW52A			Unplanned Interruption		N/A			31/03/2017 07 14	31/03/2017 11 45	22	22	22	0	0	0	4 Hrs 31 Mins 0 Secs	4	31	0	(UPRN 187186325) - [redacted]	FALSE			Burst Main/Main Repair
159733	118452	Registered	Networks Water	NW03B			Unplanned Interruption		N/A			30/03/2017 08 08	30/03/2017 12 45	1050	1050	1050	0	0	0	4 Hrs 37 Mins 0 Secs	4	37	0	(UPRN 187549352) - [redacted]	FALSE			Other
139485	108265	Registered	Networks Water	NW02B			Unplanned Interruption		N/A			03/03/2017 15 49	03/03/2017 20 30	45	45	45	0	0	0	4 Hrs 41 Mins 0 Secs	4	41	0	(UPRN 187318544) - [redacted]	FALSE			Water Supply Failure
159687	118421	Submitted to Area Manager	Networks Water	NW53A			Unplanned Interruption		N/A			25/03/2017 13 10	25/03/2017 18 00	51	4	4	0	0	0	4 Hrs 50 Mins 0 Secs	4	50	0	(UPRN 185915161) - [redacted]	FALSE			Burst Main/Main Repair
139490	108268	Submitted to Area Manager	Networks Water	NW51A			Unplanned Interruption		N/A			05/03/2017 08 00	05/03/2017 13 00	13	13	13	0	0	0	5 Hrs 0 Mins 0 Secs	5	0	0	(UPRN 185554223) - [redacted]	FALSE			Burst Main/Main Repair
139493	108269	Registered	Networks Water	NW53A			Unplanned Interruption		N/A			05/03/2017 10 00	05/03/2017 15 00	435	435	435	0	0	0	5 Hrs 0 Mins 0 Secs	5	0	0	(UPRN 185889526) - [redacted]	FALSE			Burst Main/Main Repair
139548	108318	Submitted to Area Manager	Networks Water	NW51A			Unplanned Interruption		N/A			09/03/2017 21 45	10/03/2017 03 00	14	14	14	0	0	0	5 Hrs 15 Mins 0 Secs	5	15	0	(UPRN 185488898) - [redacted]	FALSE			Burst Main/Main Repair
139644	108394	Submitted to Customer Field Manager	Networks Water	NW51B			Unplanned Interruption		N/A			21/03/2017 12 14	21/03/2017 17 30	189	189	189	0	0	0	5 Hrs 16 Mins 0 Secs	5	16	0	Service Reservoir - [redacted]	FALSE			Other
149665	118411	Registered	Networks Water	NW03D			Unplanned Interruption		N/A			23/03/2017 12 10	23/03/2017 17 35	54	54	54	0	0	0	5 Hrs 25 Mins 0 Secs	5	25	0	(UPRN 185824689) - [redacted]	FALSE			Burst Main/Main Repair
149672	118417	Submitted to Customer Field Manager	Networks Water	NW03D			Unplanned Interruption		N/A			24/03/2017 09 30	24/03/2017 15 00	2177	2177	2177	0	0	0	5 Hrs 30 Mins 0 Secs	5	30	0	(UPRN 185344353) - [redacted]	FALSE			Burst Main/Main Repair
159714	118438	Submitted to Customer Field Manager	Networks Water	NW03B			Unplanned Interruption		N/A			28/03/2017 12 10	28/03/2017 17 40	356	356	356	0	0	0	5 Hrs 30 Mins 0 Secs	5	30	0	(UPRN 185301303) - [redacted]	TRUE			Pump Equipment Failure
139476	108261	Submitted to Area Manager	Networks Water	NW53A			Unplanned Interruption		N/A			03/03/2017 10 13	03/03/2017 15 44	96	96	96	0	0	0	5 Hrs 31 Mins 0 Secs	5	31	0	(UPRN 185661989) - [redacted]	FALSE			Burst Main/Main Repair
139650	108395	Submitted to Customer Field Manager	Networks Water	NW51B			Unplanned Interruption		N/A			21/03/2017 10 28	21/03/2017 21 06	5	2	2	0	0	0	5 Hrs 33 Mins 0 Secs	5	33	0	(UPRN 185688288) - [redacted]	FALSE			Airlock in Main
139465	108255	Submitted to Customer Field Manager	Networks Water	NW51B			Unplanned Interruption		N/A			02/03/2017 10 04	02/03/2017 15 41	25	25	25	0	0	0	5 Hrs 37 Mins 0 Secs	5	37	0	(UPRN 185674802) - [redacted]	FALSE			Other
139521	108300	Submitted to Area Manager	Networks Water	NW51B			Unplanned Interruption		N/A			08/03/2017 09 37	08/03/2017 15 27	200	135	135	0	0	0	5 Hrs 50 Mins 0 Secs	5	50	0	(UPRN 185685575) - [redacted]	FALSE			Burst Main/Main Repair
139656	108405	Submitted to Customer Field Manager	Networks Water	NW03A			Unplanned Interruption		N/A			22/03/2017 11 29	22/03/2017 17 25	22	22	22	0	0	0	5 Hrs 56 Mins 0 Secs	5	56	0	(UPRN 185876303) - [redacted]	FALSE			Burst Main/Main Repair
139487	108266	Submitted to Customer Field Manager	Networks Water	NW51B			Unplanned Interruption		N/A			04/03/2017 07 40	04/03/2017 14 04	43	43	43	43	0	0	6 Hrs 24 Mins 0 Secs	6	24	0	(UPRN 185700169) - [redacted]	FALSE			Burst Main/Main Repair
139590	108353	Submitted to Customer Field Manager	Networks Water	NW52B			Unplanned Interruption		N/A			14/03/2017 08 38	14/03/2017 15 02	29	1	1	1	0	0	6 Hrs 24 Mins 0 Secs	6	24	0	(UPRN 187298279) - [redacted]	FALSE			Burst Main/Main Repair
139572	108342	Submitted to Area Manager	Networks Water	NW51A			Unplanned Interruption		N/A			13/03/2017 07 05	13/03/2017 13 55	68	68	68	68	0	0	6 Hrs 50 Mins 0 Secs	6	50	0	(UPRN 185489168) - [redacted]	FALSE			Burst Main/Main Repair
139590	108353	Submitted to Customer Field Manager	Networks Water	NW52B			Unplanned Interruption		N/A			14/03/2017 08 38	14/03/2017 15 40	29	28	28	28	0	0	7 Hrs 2 Mins 0 Secs	7	2	0	(UPRN 187298279) - [redacted]	FALSE			Burst Main/Main Repair
139521	108300	Submitted to Area Manager	Networks Water	NW51B			Unplanned Interruption		N/A			08/03/2017 09 37	08/03/2017 17 05	200	38	38	38	0	0	7 Hrs 28 Mins 0 Secs	7	28	0	(UPRN 185685575) - [redacted]	FALSE			Burst Main/Main Repair
139521	108300	Submitted to Area Manager	Networks Water	NW51B			Unplanned Interruption		N/A			08/03/2017 09 37	08/03/2017 18 35	200	26	26	26	0	0	8 Hrs 58 Mins 0 Secs	8	58	0	(UPRN 185685575) - [redacted]	FALSE			Burst Main/Main Repair
139521	108300	Submitted to Area Manager	Networks Water	NW51B			Unplanned Interruption		N/A			08/03/2017 09 37	08/03/2017 18 40	200	1	1	1	0	0	9 Hrs 3 Mins 0 Secs	9	3	0	(UPRN 185685575) - [redacted]	FALSE			Burst Main/Main Repair
139569	108333	Submitted to Area Manager	Networks Water	NW51B			Unplanned Interruption		N/A			11/03/2017 10 09	11/03/2017 19 55	5	5	5	5	0	0	9 Hrs 46 Mins 0 Secs	9	46	0	(UPRN 185685876) - [redacted]	FALSE			Airlock in Main
139650	108395	Submitted to Customer Field Manager	Networks Water	NW51B			Unplanned Interruption		N/A			21/03/2017 10 28	21/03/2017 21 06	5	3	3	3	0	0	10 Hrs 38 Mins 0 Sec	10	38	0	(UPRN 185688288) - [redacted]	FALSE			Airlock in Main

Unplanned, Unwarned Interruptions

More than 6 hrs **No of Properties** **213**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description
139487	108266	Submitted to Customer Field Manager	Networks Water	NW51B	[redacted]		Unplanned Interruption		N/A			04/03/2017 07 40	04/03/2017 14 04	43	43	43	43	0	0	6 Hrs 24 Mins 0 Secs	6	24	0	(UPRN 185700169) - [redacted]	FALSE			Burst Main/Main Repair
139590	108353	Submitted to Customer Field Manager	Networks Water	NW52B			Unplanned Interruption		N/A			14/03/2017 08 38	14/03/2017 15 02	29	1	1	1	0	0	6 Hrs 24 Mins 0 Secs	6	24	0	(UPRN 187298279) - [redacted]	FALSE			Burst Main/Main Repair
139572	108342	Submitted to Area Manager	Networks Water	NW51A			Unplanned Interruption		N/A			13/03/2017 07 05	13/03/2017 13 55	68	68	68	68	0	0	6 Hrs 50 Mins 0 Secs	6	50	0	(UPRN 185489168) - [redacted]	FALSE			Burst Main/Main Repair
139590	108353	Submitted to Customer Field Manager	Networks Water	NW52B			Unplanned Interruption		N/A			14/03/2017 08 38	14/03/2017 15 40	29	28	28	28	0	0	7 Hrs 2 Mins 0 Secs	7	2	0	(UPRN 187298279) - [redacted]	FALSE			Burst Main/Main Repair
139521	108300	Submitted to Area Manager	Networks Water	NW51B			Unplanned Interruption		N/A			08/03/2017 09 37	08/03/2017 17 05	200	38	38	38	0	0	7 Hrs 28 Mins 0 Secs	7	28	0	(UPRN 185685575) - [redacted]	FALSE			Burst Main/Main Repair
139521	108300	Submitted to Area Manager	Networks Water	NW51B			Unplanned Interruption		N/A			08/03/2017 09 37	08/03/2017 18 35	200	26	26	26	0	0	8 Hrs 58 Mins 0 Secs	8	58	0	(UPRN 185685575) - [redacted]	FALSE			Burst Main/Main Repair
139521	108300	Submitted to Area Manager	Networks Water	NW51B			Unplanned Interruption		N/A			08/03/2017 09 37	08/03/2017 18 40	200	1	1	1	0	0	9 Hrs 3 Mins 0 Secs	9	3	0	(UPRN 185685575) - [redacted]	FALSE			Burst Main/Main Repair
139569	108333	Submitted to Area Manager	Networks Water	NW51B			Unplanned Interruption		N/A			11/03/2017 10 09	11/03/2017 19 55	5	5	5	5	0	0	9 Hrs 46 Mins 0 Secs	9	46	0	(UPRN 185685876) - [redacted]	FALSE			Airlock in Main
139650	108395	Submitted to Customer Field Manager	Networks Water	NW51B			Unplanned Interruption		N/A			21/03/2017 10 28	21/03/2017 21 06	5	3	3	3	0	0	10 Hrs 38 Mins 0 Sec	10	38	0	(UPRN 185688288) - [redacted]	FALSE			Airlock in Main

Unplanned, Unwarned Interruptions

More than 12 hr **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Unplanned, Unwarned Interruptions

More than 24 hr **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Appendix G – DG3 Register Extract *(Planned & Warned Interruption, Third Party Interruption & Overrun Events – CIMS Report RPT1184)*

Planned and Warned Interruptions

More than 3 hrs **No of Properties** **1,043**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description
139503	108313	Registered	Networks Water	NW53A	[redacted]		Planned Interruption	06/03/2017 12 00	Card drop	09/03/2017 08 00	09/03/2017 16 00	09/03/2017 12 50	09/03/2017 15 57	33	33	33	0	0	0	3 Hrs 7 Mins 0 Secs	3	7	0	(UPRN 185902917) - [redacted]	FALSE			Install New Fitting (e.g. SV, FH)
139578	108369	Registered	Networks Water	NW52B			Planned Interruption	13/03/2017 09 00	Card drop	16/03/2017 09 00	16/03/2017 16 00	16/03/2017 09 45	16/03/2017 13 00	59	59	59	0	0	0	3 Hrs 15 Mins 0 Secs	3	15	0	(UPRN 185468676) - [redacted]	FALSE			Install New Fitting (e.g. SV, FH)
139642	108392	Registered	Networks Water	NW02B			Planned Interruption	17/03/2017 12 00	Card drop	21/03/2017 09 00	21/03/2017 16 00	21/03/2017 10 50	21/03/2017 14 40	8	8	8	0	0	0	3 Hrs 50 Mins 0 Secs	3	50	0	(UPRN 185226789) - [redacted]	FALSE			Burst Main/Main Repair
139522	108301	Registered	Networks Water	NW02B			Planned Interruption	03/03/2017 10 12	Card drop	08/03/2017 09 00	08/03/2017 17 00	08/03/2017 10 50	08/03/2017 15 20	9	9	9	0	0	0	4 Hrs 30 Mins 0 Secs	4	30	0	(UPRN 185209473) - [redacted]	FALSE			Install New Fitting (e.g. SV, FH)
139597	108408	Submitted to Customer Field Manager	Networks Water	NW53A			Planned Interruption	14/03/2017 08 00	Card drop	16/03/2017 09 00	16/03/2017 16 00	16/03/2017 10 50	16/03/2017 15 24	25	25	25	0	0	0	4 Hrs 34 Mins 0 Secs	4	34	0	(UPRN 185908714) - [redacted]Q	FALSE			Install New Fitting (e.g. SV, FH)
139586	108376	Registered	Networks Water	NW02B			Planned Interruption	13/03/2017 10 00	Card drop	16/03/2017 09 00	16/03/2017 16 00	16/03/2017 10 10	16/03/2017 14 45	300	300	300	0	0	0	4 Hrs 35 Mins 0 Secs	4	35	0	(UPRN 185957908) - [redacted]	FALSE			Replacement Fitting (e.g. SV, FH)
139536	108323	Registered	Networks Water	NW53A			Planned Interruption	06/03/2017 09 00	Card drop	10/03/2017 09 00	10/03/2017 16 00	10/03/2017 10 30	10/03/2017 15 20	14	14	14	0	0	0	4 Hrs 50 Mins 0 Secs	4	50	0	(UPRN 187401750) - [redacted]	FALSE			Install New Fitting (e.g. SV, FH)
159751	118461	Submitted to Customer Field Manager	Networks Water	NW03A			Planned Interruption	29/03/2017 09 00	Card drop	31/03/2017 09 00	31/03/2017 16 00	31/03/2017 09 20	31/03/2017 14 25	94	94	94	0	0	0	5 Hrs 5 Mins 0 Secs	5	5	0	(UPRN 185336171) - [redacted]	FALSE			Burst Main/Main Repair
139576	108374	Registered	Networks Water	NW52A			Planned Interruption	13/03/2017 09 00	Card drop	16/03/2017 09 00	16/03/2017 16 00	16/03/2017 09 25	16/03/2017 14 45	21	21	21	0	0	0	5 Hrs 20 Mins 0 Secs	5	20	0	(UPRN 185393554) - [redacted]	FALSE			Replacement Fitting (e.g. SV, FH)
139652	108401	Registered	Networks Water	NW51A			Planned Interruption	17/03/2017 09 00	Card drop	22/03/2017 09 00	22/03/2017 16 00	22/03/2017 09 00	22/03/2017 14 30	80	80	80	0	0	0	5 Hrs 30 Mins 0 Secs	5	30	0	Treated Water Pumping Station - S03695 - Curryfree - Curryfree Road, Carnafarn, Londonderry, Londonde	FALSE			Install New Fitting (e.g. SV, FH)
159724	118449	Submitted to Customer Field Manager	Networks Water	NW03D			Planned Interruption	27/03/2017 12 00	Card drop	29/03/2017 22 00	30/03/2017 08 00	29/03/2017 22 00	30/03/2017 03 30	42	42	42	0	0	0	5 Hrs 30 Mins 0 Secs	5	30	0	(UPRN 187549352) - [redacted]	FALSE			Mains Rehabilitation
139499	108291	Registered	Networks Water	NW53A			Planned Interruption	03/03/2017 09 00	Card drop	07/03/2017 09 00	07/03/2017 17 00	07/03/2017 09 30	07/03/2017 16 00	132	132	132	132	0	0	6 Hrs 30 Mins 0 Secs	6	30	0	(UPRN 185908686) - [redacted]	FALSE			Other
139525	108312	Registered	Networks Water	NW53A			Planned Interruption	03/03/2017 10 00	Card drop	09/03/2017 09 00	09/03/2017 16 00	09/03/2017 09 00	09/03/2017 15 45	65	65	65	65	0	0	6 Hrs 45 Mins 0 Secs	6	45	0	(UPRN 187225008) - [redacted]	FALSE			Install New Fitting (e.g. SV, FH)
139592	108365	Registered	Networks Water	NW51A			Planned Interruption	11/03/2017 10 00	Card drop	15/03/2017 09 00	15/03/2017 19 00	15/03/2017 09 05	15/03/2017 16 00	81	81	81	81	0	0	6 Hrs 55 Mins 0 Secs	6	55	0	Treated Water Pumping Station - S03695 - Curryfree - Curryfree Road, Carnafarn, Londonderry, Londonde	FALSE			Replacement Fitting (e.g. SV, FH)
139563	108347	Registered	Networks Water	NW51B			Planned Interruption	10/03/2017 09 00	Card drop	13/03/2017 09 00	13/03/2017 17 00	13/03/2017 09 30	13/03/2017 16 30	12	12	12	12	0	0	7 Hrs 0 Mins 0 Secs	7	0	0	(UPRN 185700120) - [redacted]QB	FALSE			Replacement Fitting (e.g. SV, FH)
139596	108356	Registered	Networks Water	NW51B			Planned Interruption	08/03/2017 09 00	Card drop	14/03/2017 09 00	14/03/2017 18 00	14/03/2017 10 00	14/03/2017 17 15	61	61	61	61	0	0	7 Hrs 15 Mins 0 Secs	7	15	0	(UPRN 187339995) - [redacted]	FALSE			New Mains Tie In
139523	108304	Registered	Networks Water	NW51B			Planned Interruption	03/03/2017 10 00	Card drop	08/03/2017 09 00	08/03/2017 19 00	08/03/2017 09 00	08/03/2017 19 00	7	7	7	7	0	0	10 Hrs 0 Mins 0 Secs	10	0	0	Treated Water Pumping Station - S03688 - Castledamph - Castledamph Road, Castledamph, Plumbridge, T	FALSE			Other

Planned and Warned Interruptions

More than 6 hrs **No of Properties** **358**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description
139499	108291	Registered	Networks Water	NW53A	[redacted]		Planned Interruption	03/03/2017 09 00	Card drop	07/03/2017 09 00	07/03/2017 17 00	07/03/2017 09 30	07/03/2017 16 00	132	132	132	132	0	0	6 Hrs 30 Mins 0 Secs	6	30	0	(UPRN 185908686) - [redacted]	FALSE			Other
139525	108312	Registered	Networks Water	NW53A			Planned Interruption	03/03/2017 10 00	Card drop	09/03/2017 09 00	09/03/2017 16 00	09/03/2017 09 00	09/03/2017 15 45	65	65	65	65	0	0	6 Hrs 45 Mins 0 Secs	6	45	0	(UPRN 187225008) - [redacted]	FALSE			Install New Fitting (e.g. SV, FH)
139592	108365	Registered	Networks Water	NW51A			Planned Interruption	11/03/2017 10 00	Card drop	15/03/2017 09 00	15/03/2017 19 00	15/03/2017 09 05	15/03/2017 16 00	81	81	81	81	0	0	6 Hrs 55 Mins 0 Secs	6	55	0	Treated Water Pumping Station - S03695 - Curryfree - Curryfree Road, Carnafarn, Londonderry, Londonde	FALSE			Replacement Fitting (e.g. SV, FH)
139563	108347	Registered	Networks Water	NW51B			Planned Interruption	10/03/2017 09 00	Card drop	13/03/2017 09 00	13/03/2017 17 00	13/03/2017 09 30	13/03/2017 16 30	12	12	12	12	0	0	7 Hrs 0 Mins 0 Secs	7	0	0	(UPRN 185700120) - [redacted]	FALSE			Replacement Fitting (e.g. SV, FH)
139596	108356	Registered	Networks Water	NW51B			Planned Interruption	08/03/2017 09 00	Card drop	14/03/2017 09 00	14/03/2017 18 00	14/03/2017 10 00	14/03/2017 17 15	61	61	61	61	0	0	7 Hrs 15 Mins 0 Secs	7	15	0	(UPRN 187339995) - [redacted]	FALSE			New Mains Tie In
139523	108304	Registered	Networks Water	NW51B			Planned Interruption	03/03/2017 10 00	Card drop	08/03/2017 09 00	08/03/2017 19 00	08/03/2017 09 00	08/03/2017 19 00	7	7	7	7	0	0	10 Hrs 0 Mins 0 Secs	10	0	0	Treated Water Pumping Station - S03688 - Castledamph - Castledamph Road, Castledamph, Plumbridge, T	FALSE			Other

Planned and Warned Interruptions

More than 12 hr **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Planned and Warned Interruptions

More than 24 hr **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Interruptions caused by third parties

More than 3 hrs **No of Properties** **99**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description
139466	108252	Submitted to Customer Field Manager	Networks Water	NW51A	[redacted]		Unplanned Interruption		N/A			02/03/2017 12 21	02/03/2017 16 05	99	99	99	0	0	0	3 Hrs 44 Mins 0 Secs	3	44	0	(UPRN 185738678) - [redacted]	TRUE	Gas Contrac	[redacted]	Burst Main/Main Repair

Interruptions caused by third parties

More than 6 hrs **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Interruptions caused by third parties

More than 12 hr **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Interruptions caused by third parties

More than 24 hr **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Unplanned Interruptions (Overruns of Planned Interruptions)

More than 3 hrs **No of Properties** **0**

Event Id	Interruption Id User Friendly	Interruption Status Name	Managing Function Name	Field Manager Area Name	Event Creator	DG3 Creator	Interruption Type Name	Planned Warning Date Time 1	Planned Warning Type	Planned Start Date Time 1	Planned Restoration Date Time 1	Actual Start Date Time 1	Actual Supply Restored Date Time 1	Total Affected Properties Count 1	Number of Properties Affected	Number of Properties Affected 3	Number of Properties Affected 6	Number of Properties Affected 12	Number of Properties Affected 24	Property Duration	Property Duration Hours	Property Duration Minutes	Property Duration Seconds	Location	Third Party Caused Interruption	Third Party	Other Third Party Details	Interruption Cause Description

Appendix G – DG3 Register Extract *(Unplanned Interruption Property Records – CIMS Report RPT1183)*

LastRun
28/04/2017 15:37

Event Id	Interruption Id User Friendly	Interruption Status	Managing Function	Field Manager Area	Event Creator	DG3 Creator	Interruption Name	Planned Warning Type	Planned Warning Date Time	Duration Hours	Duration Minutes	Duration Seconds	Planned Start Date Time	Planned Restoration Date Time	Actual Start Date Time	Unplanned Estimated Restoration Date	Unplanned Repair Commenced	Actual Supply Restored Date Time	Water Sampler Contacted Date Time	Unplanned Estimated All Properties	PRIMARY THORFARE	BUILDING NUMBER	BUILDING NAME	SUB BUILDING NAME	SECONDARY THORFARE	TOWN	POSTCODE	DTM HEIGHT M	Affected Area Property	Affected Area Property	Affected Area Property	Total Affected Properti	Location	Property DMA	Third Party Caused Interruption	Third Party	Description
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]					Jonesborou	[redacted]		14	0	4	18	(UPRN: 85345215) - [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]	10				Jonesborou	[redacted]		14	0	4	18	(UPRN: 85345215) [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]	12				Jonesborou	[redacted]	113.22	14	0	4	18	(UPRN: 85345215) - [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]	15				Jonesborou	[redacted]	105.59	14	0	4	18	(UPRN: 85345215) - [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]	17				Jonesborou	[redacted]	119.6	14	0	4	18	(UPRN: 85345215) - [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]	17				Jonesborou	[redacted]	105.59	14	0	4	18	(UPRN: 85345215) - [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]	18				Jonesborou	[redacted]	125.02	14	0	4	18	(UPRN: 85345215) - [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]	2				Jonesborou	[redacted]		14	0	4	18	(UPRN: 85345215) [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]	22				Jonesborou	[redacted]	111.4	14	0	4	18	(UPRN: 85345215) - [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]	26				Jonesborou	[redacted]	107.59	14	0	4	18	(UPRN: 85345215) - [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]	28				Jonesborou	[redacted]	121.91	14	0	4	18	(UPRN: 85345215) - [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]					Jonesborou	[redacted]		14	0	4	18	(UPRN: 85345215) - [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]	30				Jonesborou	[redacted]		14	0	4	18	(UPRN: 85345215) [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]	0A				Jonesborou	[redacted]	105.42	14	0	4	18	(UPRN: 85345215) - [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]	32				Jonesborou	[redacted]		14	0	4	18	(UPRN: 85345215) [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]	32A				Jonesborou	[redacted]		14	0	4	18	(UPRN: 85345215) - [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]	5				Jonesborou	[redacted]		14	0	4	18	(UPRN: 85345215) - [redacted]	C1288	FALSE		Burst Main/Main Repair
139459	108250	Submitted to Customer Field Manager	Networks Water	NW03D	[redacted]	[redacted]	Unplanned Interruption	N/A		4	10	0			01/03/2017 16:50	01/03/2017 21: 0	0 /0 /2017 20:00	01/03/2017 21:00	01/03/2017 21:20	01/03/2017 21:15	[redacted]	7				Jonesborou	[redacted]		14	0	4	18	(UPRN: 85345215) - [redacted]	C1288	FALSE		Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]					Ballymoney	[redacted]	47.67	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	10				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	1				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	11A				Ballymoney	[redacted]	47.51	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	12				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	1				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	14				Ballymoney	[redacted]	47.24	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	15				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	16				Ballymoney	[redacted]	47.22	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	17				Ballymoney	[redacted]	47.26	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	18				Ballymoney	[redacted]	47.17	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	19				Ballymoney	[redacted]	47.03	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	2				Ballymoney	[redacted]	47.45	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	20				Ballymoney	[redacted]	46.78	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	2				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	22				Ballymoney	[redacted]	47	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	2				Ballymoney	[redacted]	46.93	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	24				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	25				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	26				Ballymoney	[redacted]	46.75	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	27				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]					Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	4				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	5				Ballymoney	[redacted]	47. 8	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	6				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	6A				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	7				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	7A				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	8				Ballymoney	[redacted]	48.1	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	8A				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	9				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	9A				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]					Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	10				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	1				Ballymoney	[redacted]	50.65	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	12				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	14				Ballymoney	[redacted]	47.93	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	15				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	16				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	17				Ballymoney	[redacted]	47.1	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	18				Ballymoney	[redacted]	47.04	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	19				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	2				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	20				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	2				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	22				Ballymoney	[redacted]	46.54	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	2				Ballymoney	[redacted]	46.59	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	24				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	25				Ballymoney	[redacted]	46.21	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	26				Ballymoney	[redacted]	46.02	99	0	0	99	(UPRN: 857 8678) - [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	27				Ballymoney	[redacted]	45.57	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	28				Ballymoney	[redacted]	45.55	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	29				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]					Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678 [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	30				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	3				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	32				Ballymoney	[redacted]	45.43	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	3				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	34				Ballymoney	[redacted]	45.47	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	35				Ballymoney	[redacted]	45.71	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	36				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	37				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	38				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	39				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	4				Ballymoney	[redacted]	47.81	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	40				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	4				Ballymoney	[redacted]	47.05	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	42				Ballymoney	[redacted]	47.24	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	4				Ballymoney	[redacted]	47.92	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	44				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	45				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	46				Ballymoney	[redacted]	46.92	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	47				Ballymoney	[redacted]	47	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	48				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	49				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	5				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	50				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	5				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	52				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	6				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	7				Ballymoney	[redacted]	48.57	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	8				Ballymoney	[redacted]	47.92	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	9				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]					Ballymoney	[redacted]	46.54	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	10				Ballymoney	[redacted]	46.03	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	1				Ballymoney	[redacted]	45.76	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	2				Ballymoney	[redacted]	45.98	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	8				Ballymoney	[redacted]	46.01	99	0	0	99	(UPRN: 857 8678) [redacted]	C1025	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]					Ballymoney	[redacted]	45.81	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	10				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	1				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	2				Ballymoney	[redacted]	45.68	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]					Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	4				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	5				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	6				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	7				Ballymoney	[redacted]	45. 8	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	8				Ballymoney	[redacted]	45.44	99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair
139466	108252	Submitted to Area Manager	Networks Water	NW51A	[redacted]	[redacted]	Unplanned Interruption	N/A		3	44	0			02/03/2017 12:2	02/03/2017 18:00	02/0 /2017 13:00	02/03/2017 6:05	02/03/2017 16:05	02/03/2017 16:05	[redacted]	9				Ballymoney	[redacted]		99	0	0	99	(UPRN: 857 8678) [redacted]	C1026	TRUE	Gas Contractor	Burst Main/Main Repair

Appendix G – DG3 Register Extract *(Planned Interruption Property Records – CIMS Report RPT1183)*

LastRun
28/04/2017 15:37

Event Id	Interruption Id User Friendly	Interruption Status	Managing Function	Field Manager Area	Event Creator	DG3 Creator	Interruption Name	Planned Warning Type	Planned Warning Date Time	Duration Hours	Duration Minutes	Duration Seconds	Planned Start Date Time	Planned Restoration Date Time	Actual Start Date Time	Unplanned Estimated Restoration Date	Unplanned Repair Commenced	Actual Supply Restored Date Time	Water Sampler Contacted Date Time	Unplanned Estimated All Properties	PRIMARY THORFARE	BUILDING NUMBER	BUILDING NAME	SUB BUILDING NAME	SECONDARY THORFARE	TOWN	POSTCODE	DTM HEIGHT M	Affected Area Property	Affected Area Property	Affected Area Property	Total Affected Properti	Location	Property DMA	Third Party Caused Interruption	Third Party	Description
139499	108291	Submitted to Area Manager	Networks Water	NW53A	[redacted]		Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30		[redacted]	1				Rosslea	[redacted]		115	5	12	132	(UPRN: 185908686) - [redacted] Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			10				Rosslea		81.34	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			100				Rosslea		112.53	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			103				Rosslea		111.93	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			104				Rosslea		113. 8	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			105				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			107				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			108				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			109				Rosslea		105.54	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			111				Rosslea		114. 8	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			112				Rosslea		112.59	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			113				Rosslea		117.24	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			114				Rosslea		108.62	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			115				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			118				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			120				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			121				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			123				Rosslea		122.55	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			125				Rosslea	[redacted]	114.7	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			129				Rosslea		110.07	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			13				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			130				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			133				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			134				Rosslea	[redacted]	115.11	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			135				Rosslea		108.97	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			136				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			138				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			139				Rosslea		113.1	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			140				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			143				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			144				Rosslea		119.97	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			147				Rosslea	[redacted]	118. 8	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			15				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			151				Rosslea		106.46	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			152				Rosslea		118.31	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			153				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			154				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			156				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			158				Rosslea	[redacted]	124.86	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			160				Rosslea		128.13	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			162				Rosslea		123.21	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			163				Rosslea		113.3	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			168				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			17				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			170				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			171				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			174A	[redacted]	[redacted]		Rosslea		125.68	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			174B				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			175				Rosslea		143.25	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			176				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			177				Rosslea		154.63	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			179				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			17A				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			180				Rosslea		127.07	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			181				Rosslea		151.98	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			185				Rosslea		163.01	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			19				Rosslea		83.73	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			190				Rosslea		148.22	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			191				Rosslea		136.77	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			192				Rosslea	[redacted]		115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			195				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			198				Rosslea		150.95	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			199				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			202				Rosslea		132.94	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			203				Rosslea		168.47	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			205				Rosslea		169.85	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			206				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			207				Rosslea		177.71	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			208				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			209				Rosslea		171.68	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			211				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			212				Rosslea		157.71	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			213				Rosslea		179.72	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			215				Rosslea		161.94	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			217				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			219				Rosslea		178.11	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			222				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			223				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			23				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			232				Rosslea		205.89	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			235				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			237				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			24				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			242				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			245				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			25				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			255				Rosslea		238.97	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0699	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			26				Rosslea		86.06	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			271				Rosslea		188.76	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0713	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			275				Rosslea		193.64	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0713	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			281				Rosslea		196.26	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0713	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			283				Rosslea	[redacted]		115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0713	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			29				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			299				Rosslea		161.14	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0713	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			3				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			30				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			305				Rosslea		161.89	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0713	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			32				Rosslea		85.93	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			34				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			36				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			40				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			41				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			42				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			46				Rosslea		91.07	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			5				Rosslea		78.01	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			50				Rosslea	[redacted]	95.42	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			52				Rosslea		102.81	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			54				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			56				Rosslea		99.28	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			59				Rosslea		95.84	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			6				Rosslea		79.45	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			62				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			63				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			64				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			65				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			67				Rosslea		97.86	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			7				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			71				Rosslea		100.14	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			75				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			77				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			8	[redacted]			Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			81				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			85				Rosslea		106.97	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			86				Rosslea		106.05	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			88				Rosslea		109.53	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			89				Rosslea		102.93	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			9				Rosslea		79.33	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			90				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			93				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			96				Rosslea			115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			97				Rosslea		108.99	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other
139499	108291	Submitted to Area Manager	Networks Water	NW53A			Planned Interruption	Card drop	03/03/2017 09:00	6	30	0	07/03/2017 09:00	07/03/2017 17 00	07/0 /2017 09:30			07/03/2017 16:00	07/03/2017 6:30			98				Rosslea		107.94	115	5	12	132	(UPRN: 185908686) - Rosslea Fermanagh BT92	C0707	FALSE		Other

Northern Ireland Water

Level of Service Methodology

DG5 Internal Flooding

Contents

1. Introduction

Objective and Aim

NI Water must maintain verifiable records for DG5. The aim of the records is to provide an auditable method for identifying the specific, properties which are affected by flooding, or are at risk of experiencing flooding.

As part of these records companies must maintain a DG5 register which should form a database of all properties, which are at risk of experiencing sewer flooding more than once in twenty years. It will enable the identification by address of individual properties which are below the reference level and should also contain information on (for example) complaints and the results of their investigation, problems which are attributable to customers apparatus and properties which experience sewer flooding but are covered by one of the allowable exclusions.

The register must clearly identify those properties below the reference level, distinguish them from those which have flooded but are not below the reference level and provide a verifiable reason for the exclusion (e.g. flooding was a result of a blockage).

The records should include:

- date of incident;
- properties affected identified by address;
- cause of flooding (including source and reason, where known);
- action taken;
- name of persons completing the records; and
- the 'Flooding' category for reporting under DG5.

Reporting Requirements

Two main outputs are required to be produced relating to internal flooding for AIR 17:

- DG5 Annual Flooding Summary – properties internally flooded as a result of overloaded sewers and other causes.
- DG5 Properties on the ‘Flooding’ register – properties at risk of flooding due to overloaded sewers, more frequently than once in twenty years and once or twice in ten years, requiring further investigation, problem status of properties on the register, annual changes to the register.

The information relating to the above is contained in Table 3 of AIR17.

2. DG5 Internal Flooding incidents – Methodology and Procedures

Internal

Data gathering and calculation is as described below.

Calculation Process - Lines 2 to 11,15a & 17

Data gathering and calculation is as described below in the Line- Specific Methodology Statements for Table 3: Lines 2 to 11,15a & 17.

Sources/Primary Process

Lines 2 – 11, 15a & 17 Properties and flooding incidents

A download of internal flooding records was obtained from the Ellipse system for the period April 2016 to March 2017 on a month by month basis.

Investigations were carried out for each reported incident and those properties found not to be flooded after investigation, using information from the Sewer Maintenance Contractor, Flood Incident Report (FIR) Forms, Field Manager reports, modelling provided by Drainage Area Plan consultant and contacting the Customers directly, are removed. The remaining properties were recorded as Flooding Incidents.

Assumption

For the purpose of AIR17, NI Water has assumed that a single incident includes recorded complaints from the same property on the same day or within three days.

'Three days' was chosen on the basis that a noticeable volume of repeat calls tends to be received within three days of an incident occurring. There is then a much longer passing of time before calls are again received from the same locality, suggesting that the original incident has passed and that the calls relate to a different incident.

An incident of internal flooding is assumed where a property has been flooded internally. If two adjacent properties are flooded at the same time, they are classed as two properties and two incidents.

Where a single property floods internally on two separate occasions then this is recorded as one property and two incidents.

Sources/Secondary Process

1. Wastewater Business Unit (WWBU) carries out further investigations to determine the cause of every internal flooding incident.
2. WWBU assess the information held on customer report, Flood Incident Report (FIR), along with photographic evidence and closure details provided by the contractor.
3. WWBU determine if the cause of the flooding incident was hydraulic incapacity or flooding other cause, i.e. Blocked Sewer, Equipment Failure or Collapsed Sewer. This is done by a number of methods including site visits, concentric circle surveys, Customer Field Manager reports, modelling provided by Drainage Area Plan consultant, customer interviews, field manager interviews and review of existing incident information.
4. If hydraulic incapacity is confirmed a Met Office Weather report is used to determine if the incident is as a result of severe weather (Line 4).
5. These properties were then recorded on a spreadsheet under the appropriate categories for lines 2, 3, 4, 4a, 5, 6, 8, 9, 10 and 11 using the information gathered from, the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports and contacting the Customers directly. A folder of evidence was created for all confirmed cases and this was brought to the monthly DG5 panel for approval and addition to the appropriate section of the register. At the end of the reporting year, this was the data used for AIR returns.
6. The figure for line 7 was obtained by having a report run in the DG5 Oracle Database, which holds the information as a DG5 layer in the GIS system.
7. The required information to populate Line 17 is extracted directly from the monthly spreadsheet completed by the contractor.

3. Internal Flooding Register

Internal Flooding Process

All internal flooding incidents are subjected to a robust investigation (See Appendix A – NI Water DG5 Internal Flooding Register Methodology). An expert panel (the DG5 Panel)

examines the evidence for each incident and governs the addition of properties to, and the removal of properties from, the register. Those records that do not meet the DG5 Criteria are recorded in the 'excluded' section of the Database. All new incidents of external flooding are being investigated in a similar manner as the Internal flooding incidents.

The register is held as an Oracle database within the Corporate Asset Register – specifically as a GIS layer on CARtomap.

Methodology applied to the completion of Table 3

Lines 12-15: the numbers have been extracted from the DG5 Oracle database

Line 16: the number has been extracted from the DG5 Oracle database

Lines 22-25 and 30-33: A folder is created (within the Asset Management section of the company network) for each addition, removal or transfer of a property. The lines were populated from an analysis of these folders; the analysis was crosschecked against the minutes of the monthly DG5 Panel meetings.

Lines 26 and 34: The 'Enhanced Service Levels' element of the capex cost was obtained from the CAPTRAX system for each relevant project and aggregated. This total cost was then divided by the number of properties removed.

Continuing investigation of Flooding incidents on the 1 in 20 register

It is recognised that a significant number of properties on the 1 in 20 Register are in the Register because of historic (pre-2008) incidents – and that, as a consequence – their inclusion within the register has a lower level of confidence.
All such properties are subject to ongoing assessment and appraisal by current Engineering Procurement projects. It is anticipated that all of these appraisals will be completed within year 17/18.

Mitigation

Properties protected from the risk of flooding by mitigation measures, such as non-return valves have been added to the 1 in 20 Register (unless evidence existed to allow addition to the 1 in 10 or 2 in 10 register).

All such properties are currently the subject of four Engineering Procurement appraisal projects – which seek to identify permanent solutions at the locations.

Additions to the Register and Transfers within the Register

A folder of evidence was created for all confirmed DG5 flooding properties and this was brought to the monthly DG5 panel meetings for their approval and addition to the appropriate section of the register.
Similarly, transfers between the register categories (**2 in 10, 1 in 10 and 1 in 20)** are brought to the attention of the DG5 Panel at the monthly meetings for approval.

Prioritisation of capital schemes

No formal prioritisation process is applied.

All capital works projects are submitted to the NI Water Capital Investment Panel for approval before implementation.

Properties, which have not flooded in the last 10 years

Properties remain on the Register that have not flooded in the past 10 years (excluding severe weather).

Appendix A NI Water DG5 Internal Flooding Register - Methodology

DG5 Internal Flooding Register - Methodology

Final v1.1

08 June 2015

1 Main Contributors	2 Aspect/Section	3 Notes
[redacted]	Draft	
[redacted]	Final	

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Revision No	Date	Description/Amendment	Checked	Reviewed	6 Authorised for Issue
0.8	26 Feb 11	Revise to include improved approach	[redacted]	[redacted]	
1.0	31 Mar 12	Finalised ahead of sign-off by DG5 Panel	[redacted]	[redacted]	[redacted]
1.1	08 Jun 15	Minor revisions and new FIR form inserted	[redacted]	[redacted]	[redacted]

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10 Introduction

10.1 Background

This document provides guidance on how the successful management of the DG5 Internal Flooding Register, within Northern Ireland (NI) Water, should be carried out. Where possible, this document complies with Ofwat and Northern Ireland Authority for Utility Regulation (NIAUR) Guidance.

10.2 Scope and Objectives

This document is owned by NI Water and describes the end-to-end business process by which a property that has experienced internal flooding is added to, and removed from the DG5 Internal Flooding Register. It will support NI Water in the development and implementation of its DG5 reporting processes and long-term management of the Register.

The purpose of this methodology is to ensure that a fully transparent, auditable process is in place for the management and maintenance of the DG5 Internal Flooding Register for NI Water in order to report to NIAUR.

11 Definitions

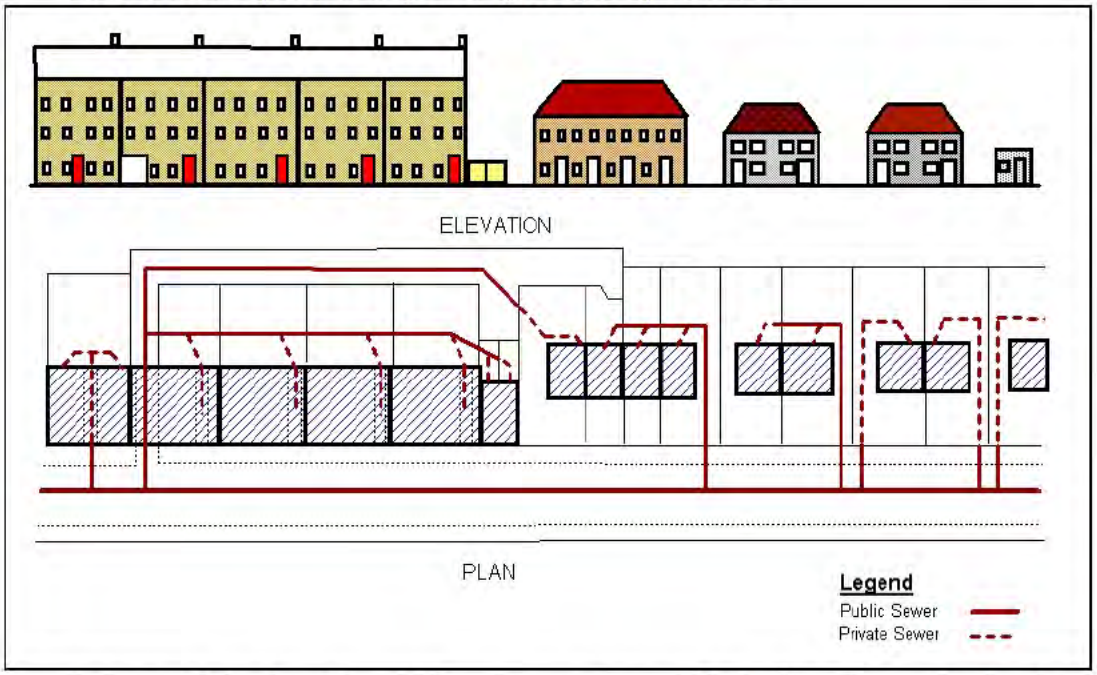
The following definitions are to be applied when recording and reporting properties and incidents held on NI Water's DG5 Internal Flooding Register.

Northern Ireland Water is only responsible for internal flooding caused by failure of the public sewerage system. This excludes private sewers, highway drainage, gullies, land drainage, and watercourses.

11.1 Legal Definitions

11.1.1 Public and Private

Northern Ireland Water is responsible for internal flooding caused by failure of the public sewerage system. The status of a sewer (i.e. whether public or private) is depicted below.



Drains; are defined as a pipe which carries waste water (sinks, baths, toilets etc.,) and trade wastes from one property to a sewer. Northern Ireland Water has responsibility for a drain up until the point of the property boundary. The length of drain within the boundary of the property lies with the property/landowner.

Public sewers; are defined as sewers serving more than a single property or, if serving a single property, sewers outside the property boundary and has been adopted, only then does responsibility lie with Northern Ireland Water.

11.1.2 Adopted and Unadopted Sewers

An adopted sewer is a sewer that is vested by NI Water and maintained at its expense. An unadopted sewer is a sewer that is either privately owned or has not yet been adopted by NI Water.

11.1.3 Third Party Responsibility

A third party incident is one where Northern Ireland Water could take action to recover costs from those responsible. Incidents due to third party attributed to hydraulic overload of the public sewerage system are significant unconsented discharges e.g. industry, leisure, domestic (swimming pool).

Where NI Water has gathered evidence that flooding of a property has occurred due to the actions of a third party, the company will attempt to recover the costs of implementing a the temporary or permanent solution.

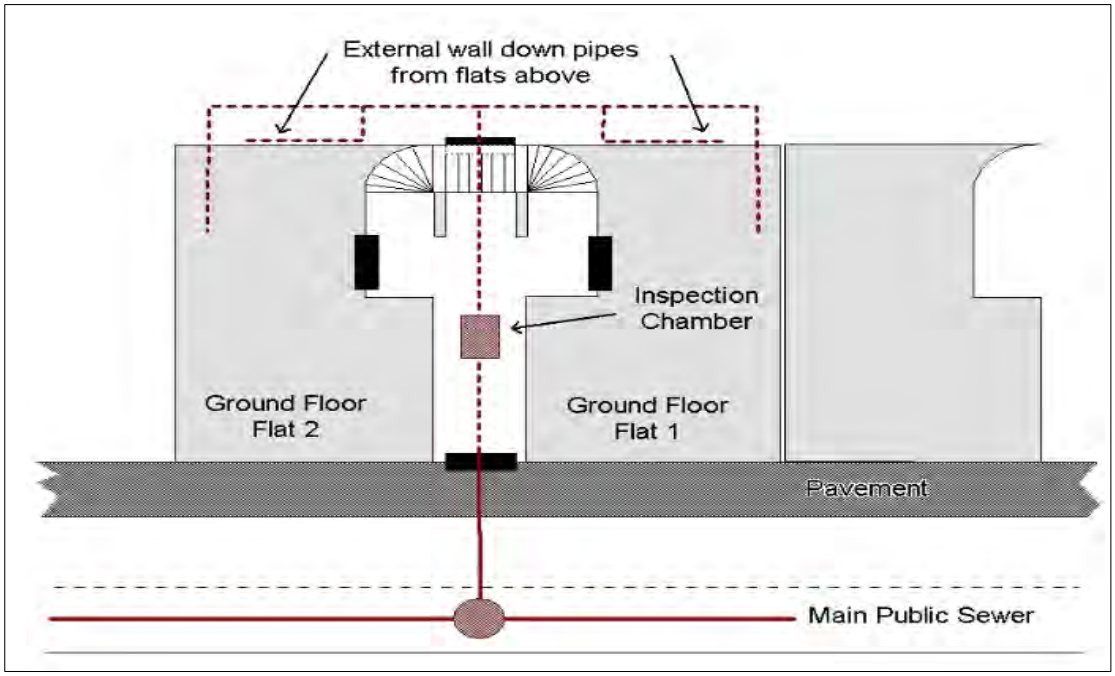
11.1.4 Basement Flooding

Customers do not have a right to connect wastewater discharges from a basement directly into the public sewerage. If a customer wishes to connect, then Northern Ireland Water will carry out investigations to confirm that by connecting the basement discharge to the public system it does not put the property at risk, because of existing conditions within the sewerage system. Written confirmation of the investigations will be given to the customer.

If a customer connects without obtaining the necessary planning permissions, then they do so at their own risk. Northern Ireland Water does not accept any responsibility for any resultant flooding incident. If basement flooding occurs due to hydraulic overload (and the customer has the right to connect) then this property will be identified as impacted by internal flooding and will be added to the appropriate register.

11.1.5 Apartment / High Rise Responsibilities

Incidents, which occur on the private drain, i.e. within the apartment block, are the responsibility of the residents. Should a flooding incident occur on the ground floor then those properties affected can be classed as internal flooding if appropriate. All other properties would be classed as external access flooding.



11.1.6 Sensitive Areas

Sensitive areas include, schools, hospitals, children play areas, nursing homes and properties of vulnerable customers. A property's sensitivity may have an impact on the prioritisation of when the solution to the internal flooding is implemented.

11.1.7 Property Classification

For reporting purposes, the following statements relate to property classification:

- Buildings that are normally occupied and used for residential, commercial, public, business or industrial purposes are included. This also includes garages that form an integral part of the property and are classed as part of the building even if the main purpose is storage.
- Buildings whose prime purpose is storage or installation of domestic appliances are not classed as occupied.
- Detached or 'linked-detached' garages i.e. those attached to a property but separated from it by an external passageway are excluded.

- A cellar forms an integral part of a building that is at least partly below ground level. Where a cellar is in regular use as part of normal living accommodation, it is termed a basement and any flooding should be reported as a normal flooding incident. Where an uninhabited cellar, i.e. one that is not used for habitation, is affected by water entering it directly (as opposed to via another part of the building) this has to be separately enumerated.

In order to ensure that the correct assessments on properties are made the following diagrams and pictures show the definitions for internal flooding against various property types;

- **Property with integral garage**
- Therefore either area flooded will be classed as internal flooding
- Flow entering the solum or living area would be classed as internal flooding and only that property recorded.

Villa – Ground Floor and 1st floor properties
Flooding to the solum of the ground floor flat will mean that only that property will be identified as suffering from internal flooding.
If the 1st floor flat is accessed via a door which enters immediately into the property and is also affected by flood water, then this will also constitute internal flooding and both will be identified as an internal flooding incident

- **Basement Property**
- A cellar that is in regular use as part of normal living accommodation is termed a basement and any flooding should be reported as a normal flooding incident.
-
-

Apartment Block
Internal Flooding would normally be contained to the ground floor flats. Individual properties affected by internal flooding will be identified and recorded. Flooding of the internal access will not be classed as internal property flooding for the remaining tenants. These will be classed as external flooding (access).

- **Semi-detached** properties with **detached** garage.
- Flooding of the garage would not be classed as internal flooding.

- **Detached** or **'linked-detached'** garages i.e. those attached to a property but separated from it by an external passageway.
- Flooding of the garage would not be classed as internal flooding.

11.1.8 Temporary and Permanent Solution

A temporary solution is defined as one which does not permanently remove the risk of flooding but reduces the risk of internal flooding happening.

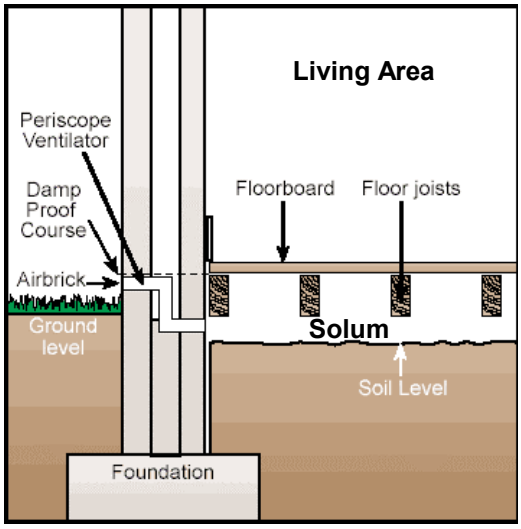
A permanent solution is defined as one that permanently addresses the cause of the hydraulic overload. Permanent works would enable a property to be removed from the DG5 Internal Flooding Register.

Examples of temporary and permanent solutions include;

Temporary Solutions	Permanent Solution
Fitting of anti-flood devices e.g. Non-Return Valve (NRV)	Land re-profiling
Air brick protection	Disconnect basement
Raising of Thresholds	Divert private drainage or public sewer
Bolt down inspection chambers	Isolate with private pumping station
Seal / bolt down manholes	Fill in hollow floors and cellars
Stop Logs	Flow attenuation
Issue of sandbags	Outfall protection e.g. flap valve
uPVC doors	Sewer Upsizing
Flood guards	'Right to purchase'

11.2 Internal Flooding Definition

A property can be deemed affected by an internal flooding incident when foul, combined or surface water escapes from the public sewerage system into a property and enters a building or passes below a suspended floor. The diagram below shows a cross section through a suspended floor.



For DG5 reporting purposes, internal flooding refers to buildings which are normally occupied and used for residential, public, commercial, business or industrial purposes. Buildings whose prime purpose is storage or installation of domestic appliances are excluded. Refer to Section 2.1.7 for Property Classification.

11.2.1 Restricted Toilet Use

Restricted Toilet Use (RTU) occurs where there is no internal flooding but where the customer us unable to flush their toilet without a risk of causing internal flooding of the property.

11.3 Flooding Cause Definition

11.3.1 Introduction

Flooding generally occurs through a combination of events and responsibility can lie with a number of different parties. Possible reasons for flooding can include:

- Blocked or overloaded drainage ditches, drains and sewers overflow across roads, gardens and into property.
- Hydraulic incapacity can on occasion cause sewers to backflow into a property.
- Rain can be so heavy that run-off flows overland down hills and slopes.
- Rain soaks into the ground causing groundwater levels to rise and flood.
- Broken or burst water mains (normally leading to basement flooding rather than property flooding above ground level).

Customers do not always distinguish between the various causes of flooding. In order to deal with an incident efficiently, it is imperative that call centre staff ascertain the cause and mechanism of the flooding. This ensures that appropriate action can be taken and the risks to the company minimised.
The cause of flooding will be determined by call centre staff asking the customer a set of pre-set questions from a call centre script.

11.3.2 Flooding due to Hydraulic Incapacity

A sewer can be classed as hydraulically incapable when the flow from a storm is unable to pass through it due to a permanent problem. Permanent problems are due to limitations in the physical characteristics of the network, generally the size of the sewer relative to flow and gradient. Properties affected by internal flooding due to hydraulic incapacity shall be placed within relevant flooding severity category unless there is evidence to prove that the flooding was due to 'Other Causes' or severe weather. Temporary problems are excluded and comprise of: Blockages, Collapses, Equipment Failure.

11.3.3 Other Causes Flooding

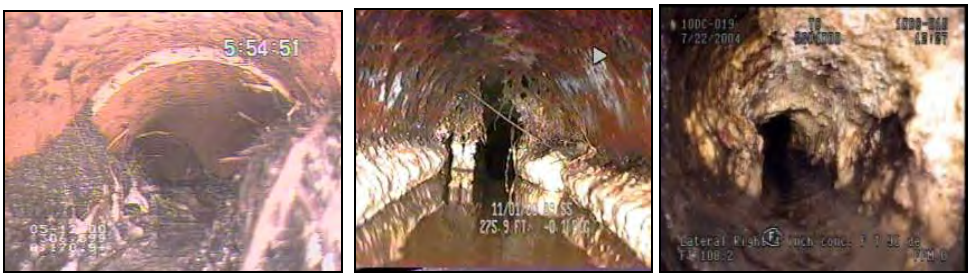
'Other Causes' are related to localised deficiencies and transient characteristics of the network. The main causes are:

- blockages
- collapses
- equipment or operational failure

These incidents are reported separately to NIAUR, but stored within the excluded section of DG5 Internal Flooding Register.

11.3.4 Blockages

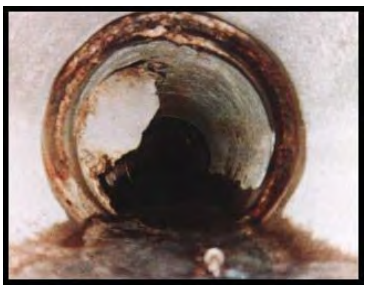
A sewer blockage can be attributed to a number of factors, including siltation, fat, roots, and debris, as shown below.



For regulatory reporting, silt, fat, roots debris are all classed as a blockage. However, it is important that the actual cause of the blockage is recorded within the incident record. The response to each of these might require a different solution. For example, a persistent fat problem may require trade effluent control or persistent siltation problems may need to be added to the de-siltation programme for that area.

11.3.5 Collapsed Sewer

In the context of the indicator a collapsed sewer, is a sewer that creates a restriction or induces a blockage, e.g. fracture, deformation, intruding junction. A rising main burst is also classified as a collapse. An example of a collapse is shown below.



11.3.6 Equipment Failure

Equipment and operational failures can be attributed to power outages, inadequate maintenance regimes, a change to operating regime other than that designed for, mechanical or electrical failure.
Where a pumping station has failed then distinction must be made between network and terminal stations, as well as the criticality or size band of the station indicated.

Where a pumping station can be seen to be overrun by the incoming flows and can be shown to be operating within its design parameters then this may be an indication of severe weather or inflow from another source e.g. watercourse, tidal, ground water infiltration etc.

If the pumping station can be seen to be beaten by in coming flows in non-severe weather conditions and can be shown to be operating within its design parameters consideration should also be given to the possibility that the capacity of the pumping station has been exceeded, i.e. the sewer network now suffers hydraulic incapacity. Properties flooded internally as a result of such situations shall be classed as DG5 reportable.

Flooding caused by failure of an anti-flood device on a private connection, e.g. NRV, should be ascribed back to the underlying cause, hydraulic incapacity, and recorded as an internal flooding incident.

11.3.7 Third Party Causes

A third party incident is one where Northern Ireland Water could take action to recover costs from those responsible. These can include the discharge of material into the public system causing a blockage, or equipment failure, vandalism, network impacted by a third party e.g. a builder or other statutory utility.

It is important that causes beyond the reasonable control of the company are identified and described especially where a claim might be pursued against a third party. If permanent improvement or temporary operational works for Northern Ireland Water causes internal flooding then this must also be recorded and the reasons given as to why it happened.

The Flood Investment Planning Group is made up of Northern Ireland Water, Rivers Agency, Roads Service and Local Councils could provide a useful forum in which to establish responsibility for disputed third party flooding.

11.3.8 Increase in Demand

Increase in demand is defined by Northern Ireland Water as predicted growth, which exceeds the available headroom within the network on the trigger event.

Verified hydraulic models shall be used to identify properties at risk of flooding as a direct result of development/ growth based on the Local Area Plan. This analysis is generally an output from a Drainage Area Study (DAS). No other analysis on demand is carried out.

11.4 Flooding Class Definition

- 1 in 10; is applied to reported flooding location due to hydraulic incapacity during a rainfall event with a return period between 5 and 10 years.
- 2 in 10; is applied to reported flooding location due to hydraulic incapacity during a rainfall event with a return period of 2 in 10 years i.e. <5 years, or has actually flooded twice within a 10 year period.
- 1 in 20; is applied to reported flooding location due to hydraulic incapacity during a rainfall event with a return period between 10 and 20 years.
- Severe Weather; locations refer to a reported flooding incident with a return period greater than 20 years.
- Flooding Other Causes; is applied to reported flooding locations where the cause of flooding has been found not to be hydraulic incapacity i.e. blockages, collapses, third party or equipment failure causes.
- Removed due to Company Action; is applied to reported flooding locations where NI Water has constructed a permanent solution to remove the risk of flooding
- Removed due to Better Information; is applied to reported flooding locations where information has been obtained which proves that the cause of flooding was not due to incapacity in the sewer system.

Internal Flooding Register – Governance

11.5 General

The NI Water DG5 Internal Flooding Register contains information on internal flooding incidents caused by the hydraulic incapacity of sewers, and properties at risk of experiencing internal flooding. NI Water's Asset Management section (AMS) is the owner of the DG5 Internal Flooding Register.

The information recorded on properties affected by internal flooding or those at risk of experiencing flooding constitutes a legal register for reporting to the NIAUR. The information contained within must be verifiable and available for audit.

NIAUR requires NI Water to produce an annual DG5 Report summarising the required DG5 information. NI Water is also required to maintain a DG5 Internal Flooding Register which holds information on properties at risk of flooding, once in twenty years and once or twice in ten years due to the hydraulic incapacity of sewers. NI Water must also report on each flooding category status of each property on the register and all annual changes to the register.

The DG5 Internal Flooding Register will contain the information required to prepare Table 3, of the Annual Information Returns (AIR). This information can be accessed via the reporting function on the DG5 incident and property database.

The DG5 Internal Flooding Register has been developed from records that date back to 1990 and the increasingly robust investigation of 'live' incidents from 2008 onwards.

11.6 Governance

Maintenance of the DG5 Internal Flooding Register and AIR reporting is the responsibility of AMS and the Network Sewerage Business Unit (NSBU). Clear definition of responsibility for actions, analysis and records within the DG5 Internal Flooding Register has been entrusted to the appropriate sections within NI Water. The stakeholders and their responsibilities have been defined within this methodology.

This end-to-end DG5 business process outlined in this document, and attached in Appendix A, will ensure that responsibilities and performance measures are in place to ensure the quality of information captured and maintained is consistent at all levels through the process.

The DG5 Panel has responsibility for approval of additions to and removals from the register, while also ensuring that the reporting processes and outputs remain robust enough to meet the reporting requirements of NIAUR. Responsibilities for the internal DG5 flooding reporting process will be reviewed on an annual basis and updated accordingly.

12 Internal Flooding Register – Business Process

12.1 Notification of Internal Flooding Incident to Call Centre

All flooding incidents are recorded through a series of different source collection methods in NI Water's asset inventory management system. This happens by customers reporting flooding incidents via our Customer Call Centre. The call handlers will establish if the incident is the responsibility of NI Water and then confirm with the customer that the incident was indeed internal flooding and record it on NI Water's call management system. A Caller Log is created with the incident information then passing to NI Water's Work Control Centre staff who distributes the relevant work order to the appropriate contractor for action. This step takes no longer than one week to complete.

12.2 Initial Investigation by Network Sewerage Business Unit

The NSBU will initiate the first phase of investigations once an internal flooding incident has been reported. Evidence gathered at this initial stage is passed to Asset Performance (AP) for further investigation/verification. The process that NSBU follow is outlined below;

- Reported Internal Flooding Incidents are downloaded from the company's asset inventory management systems and interrogated, with duplicates removed.
- Information held on Customer Reports and Flooding Incident Reports are assessed along with photographic evidence and previous flooding records to ascertain if the reported incident is internal flooding.
- NSBU to carry out further investigations to determine if the cause of flooding incident was hydraulic incapacity or due to other causes, i.e. Blocked Sewer, Equipment Failure or Collapsed Sewer. This is done by a number of methods including site visits, concentric circle surveys, customer interviews and review of existing incident information. If flooding is due to other causes, the property is placed in the excluded section of the DG5 Internal Flooding Register. (Investigation methods are outlined in Section 4.2)
- If hydraulic incapacity is confirmed NSBU use a weather report to determine if the incident is as a result of severe weather. If severe weather is confirmed the property is excluded. The same weather report, along with historic records (if applicable), is used to categorise non-severe weather incidents into one of three storm return categories – 1:20, 1:10 and 2:10. In addition properties that suffer from RTU, due to hydraulic incapacity, are also recorded. (Storm Return Categories and RTU explained in Section 4.2.10 and 4.2.11).
- Once NSBU have completed the above stages a folder of evidence is compiled and forwarded to AP for further investigation/verification.

12.3 Identification of additional properties by Engineering and Procurement

In addition to the weekly flooding incident download by NSBU, Engineering and Procurement (EP) will forward a monthly report detailing any newly identified DG5 properties to NSBU for investigation. These potential DG5 properties will be identified from on-going Capital Works Programme (CWP) Schemes. This step is completed on a monthly basis.

12.4 Further Investigation by Asset Performance

AP receives all fully investigated and categorised DG5 Properties from NSBU on a monthly basis. AP carryout further detailed investigations to verify the investigations undertaken by NSBU. Detailed investigations can include modelling, DAS, customer questionnaires, Geographical Information System (GIS) assessments and topographical surveys.

AP carryout the following investigative process;

- Assess the history of flooding incidents at each property to confirm the NSBU flooding report. Historic assessments may include investigations of reported external incidents, extreme weather event records and incidents confirmed at adjacent properties.
- Interview the Operational Area Field Manager (FM) to confirm that the property has a history of internal flooding. AP also seeks advice from the relevant FM as to the cause of the internal flooding to aid in further investigations.
- Use GIS to assess the position of the sewer network.
- Carryout site topographical surveys of the sewer network and surrounding area.
- Interview the property owner with pre-set questions in DG5 Internal Flooding Questionnaire.

- Assess existing network model, i.e. DAS, for predicted flooding to verify if property floods under specific flooding scenarios.

Once AP has completed the above stages a report will be compiled summarising the evidence gathered including recommendations. If hydraulic incapacity is confirmed the evidence will be presented to the DG5 Panel to propose adding the property to the DG5 Register.

Note; if the cause is still unknown after the course of investigations and the internal flooding is major and frequent enough to warrant a thorough investigation, then a Project Consideration Form (PCF) will be raised to propose a feasibility study.

12.5 Approval of Additions by DG5 Panel

The DG5 Panel review the evidence brought before them and decide whether to add the property to the DG5 Internal Flooding Register. If the Panel members need more evidence, the property will be returned to AP for further investigation, and then re-submitted to the Panel for consideration. This step is completed once every month.

12.6 Update of Asset Information Records

The DG5 Panel Secretary will digitise all flooding incidents approved by the DG5 Panel onto the DG5 Layer of the company's GIS System, and update the DG5 incident and property database with the associated incident.

12.7 Initiation CWP Project by Asset Performance

The DG5 Panel forward all new additions to the DG5 Internal Flooding Register to AP to initiate the CWP process. Asset Performance cross-check existing CWP Schemes to ensure the property is not included in an on-going project. A PCF will be created to begin the CWP process.

Once the relevant section of the scheme is complete a DG5 Beneficial Use Form is sent from EP to AP, where a check against drainage area studies carried out to establish if the reported flooding has been resolved. If a resolution to the flooding is confirmed AP prepare supporting evidence to present at DG5 Panel for removal from the DG5 Internal Flooding Register

12.8 Approval of Removal by DG5 Panel

If a property is to be removed from the DG5 Internal Flooding Register due to 'Company Action', a Beneficial Use Form must be presented as evidence. If a property is to be removed due to 'Better Information' a folder of evidence must be presented outlining the reasons. This is completed once every month.

This clear and strictly controlled process will govern the movement of each property as it is investigated. Each stage described above can be seen in Appendix A.

13 Internal Flooding Register – Administration, Additions and Format

This section provides guidance on how properties at risk of flooding due to the hydraulic incapacity of sewers are categorised within the DG5 Internal Flooding Register.

13.1 Rules Governing Internal Flooding Register

The following rules govern the DG5 Internal Flooding Register and describe how a property is added and removed from the register. Property additions and transfers must follow the appropriate procedure as described below. (Property removals are discussed in section 7).

13.1.1 Additions to Internal Flooding Register

This procedure must be followed for all new flooding incidents received through the weekly NSBU download (see Section 3.2). These incidents will usually have occurred recently, although it is possible new information may cause a historic event to be reclassified.

- All properties that have been affected by internal flooding, caused by hydraulic incapacity, must be reported in the DG5 Internal Flooding Register. Properties flooded due to Other Causes (Blockage, Collapse or Equipment Failure) will be placed in the 'excluded' section of the same register and reported in Table 3 of the AIR.
- First time flooding where hydraulic Incapacity is confirmed shall be supported by weather reports and any supporting DAS data.
- A property affected by internal flooding as a result of hydraulic incapacity is categorised by the severity of the rainfall event and how often flooding has been recorded.
- All properties affected by flooding due to hydraulic incapacity will be investigated to ensure that each property or area flooded is accounted for within the appropriate category.
- For repeat incidents, supporting meteorological data will be required only if there is significant difference in the number of properties affected within the same location or if an event is deemed to be severe. An increase in frequency will affect the prioritisation and in some instances the register category of some or all properties affected.
- If the event was due to 'Severe Weather' the properties are placed in the 'excluded' section of the DG5 Internal Flooding Register.
- Where a property has flooded as a result of failure of a mitigation device, it should be reported as an equipment failure.
- Only if a basement has a 'right to connect' to the public sewerage system and has flooded can it be identified as being affected by internal flooding and categorised appropriately.
- If the flooding is shown to be outside Northern Ireland Water's responsibility (Third Party), it is excluded from the DG5 Internal Flooding Register and flagged appropriately within the exclusion register.
- Properties added due to better information are placed in the DG5 Internal Flooding Register when flooding has been identified for the first time, usually as a result of network analysis, greater local knowledge or following customer contact.

13.1.2 Sources of Information

Historic information can be used with discretion in order to support or understand the full extent of a flooding incident.

If properties are found to have historically flooded when carrying out a study within a catchment (e.g. DAS) then details should be captured and the appropriate information passed to NSBU. Supporting information would include:

- The use of verified hydraulic models.
- Site and level Information.
- Customer interviews.
- Shared information between other relevant bodies e.g. Local Authorities.

Information can also include the following:

- Flooding at a property being caused by blockages/ equipment failure rather than hydraulic incapacity. Acceptable supporting data would be date stamped CCTV, or static photographic evidence.
- Severe weather classification – data provided by weather reports
- Customer Interviews
- Flooding shown to be caused by a Third Party.

13.1.3 Investigations where Hydraulic Overload is suspected

After a flooding incident has occurred it is recorded and passed to NSBU who will carry out further investigative work to ensure that the cause, mechanism and impact of flooding is identified and analysed as soon after the event as is practicable.

This process will ensure that:

- The most appropriate action is taken.
- Where necessary a cost-effective solution proposed.
- Flooding regulatory registers are maintained with accurate and up to date information.

13.1.4 Incident Investigations

Initial site investigations will be carried out by the Contractor, co-ordinated by Networks Sewerage Section. The number of properties affected by the incident and the extent of the other external areas will be recorded regardless of the cause.

If the cause cannot be attributed to 'other causes' i.e. through CCTV, visual inspections, jetting, customer liaison or third party, then a request for further investigation will be submitted via the work order. This request will be submitted to the Contractor, by Networks Sewerage for action.

13.1.5 Network Review

This is primarily a desktop exercise to review all available information on the site and relevant assets. This will include information on the catchment through existing asset management plans, DAS, hydraulic modelling, feasibility studies, MET office data analysis, and previous cluster data if a repeat incident.

If there are known operational hot spot areas then further work on capacity checks, assessment of hydraulic model predictions and historic information will be needed. A network review will only be carried out in detail where the mechanism of flooding is unclear or where the rainfall data and impact is inconsistent with other evidence.

13.1.6 Sites Investigations

These are carried out as soon as is practicable after the incident happening. This is to ensure that the necessary evidence is gathered as close to the event as is practicable.

Site investigations may also show that there is evidence to prove that unreported flooding has occurred. Investigations are carried out using the concentric circle methodology, where investigations will start at the property affected by internal flooding and work outwards to adjacent properties in all directions. This will ensure that all affected properties are captured and recorded, allowing the full scale of the internal flooding to be realised. This approach will be repeated for every property identified for each incident.

13.1.7 Customer Questionnaires

Customers can provide useful information on the events leading up to, during and after an incident has occurred. Where appropriate a customer questionnaire should be completed.

13.1.8 Weather Reports

Weather reports will only be requested if:

- It is a first time flooding incident.
- There is low confidence in understanding the problem.
- It is a repeat incident and there is a significant disparity between the numbers of properties recorded by recurring incidents.
- Severe weather is suspected

Use of weather reports to categorise properties

- Properties will be categorised as 'excluded due to severe rainfall' if the weather report identifies the storm during which the internal flooding occurred as having a return period of greater than 1 in 20 years.
- Properties will be placed in the 1 in 20 register if the weather report identifies the storm during which the internal flooding occurred as having a return period of 1 in 20 years or less and greater than 1 in 10
- Properties will be placed in the 1 in 10 register if the weather report identifies the storm during which the internal flooding occurred as having a return period of 1 in 10 years or less and greater than 1 in 5

- Properties will be placed in the 2 in 10 register if the weather report identifies the storm during which the internal flooding occurred as having a return period of 1 in 5 years or less.

13.1.9 New Hydraulic Model Builds

If a hydraulic model does not exist and the extent of the problem cannot be determined from site investigations then a model may need to be commissioned.

Note: Prior to any major capital investment a verified hydraulic model should be used for solution development.

13.1.10 Localised Enhancements to Existing Models

Where a hydraulic model exists, then it may be necessary to carry out some localised enhancements. This process may include manhole survey, and / or dis-aggregation of the network prior to any solution development. The validity of the enhancements to the model must be checked in that area against the original verified model.

13.1.11 Conversion Factors

There are a number of situations where conversion factors must be applied when calculating the DG5 value of larger premises and buildings. Normally a single property or house is considered to constitute one DG5 property. This approach assumes the single property is of typical size, with a typical number of appliances discharging into the sewer network.

For larger premises and buildings that are likely to have more appliances a conversion factor needs to be applied for the full DG5 value of the property to be realised and prioritised accordingly. Properties that are classed as large commercial premises should have the conversion factor applied.

The DG5 value will be calculated by adding together all the loading units for all the appliances in the building and dividing this figure by 24 to produce the DG5 equivalent.

Water Fitting (See note 1)	Loading Units
WC Flushing Cistern	2
Wash Basin in a house	1.5
Wash Basin elsewhere	3
Bath (Tap nominal size 20mm)	10
Bath (Tap nominal size lager than 20mm)	22
Shower	3
Sink (Tap nominal size 15mm)	3
Sink (Tap nominal size larger than 15mm)	5
Spray Tap	0.5
Bidet	1.5
Domestic Appliance (subject to a minimum of 6 LU's per house) (See note 2)	3
Communal or commercial appliance	10
Any other water fitting or outlet (including a tap – but excluding a urinal or water softener)	3

Note 1; Reference to any fitting includes reference to any plumbing, outlet, dedicated space or planning or other provision for that fitting

Worked Example – 1 Alanbrook Road, Belfast (Thales Factory)

Water Fitting	No. per property	Loading Unit	Total
WC flushing cistern	46	2	92
Wash basin in a house	0	1.5	0
Wash basin elsewhere	0	3	0

Bath (tap nominal size 20 mm)	0	10	0
Bath (tap nominal size larger than 20 mm)	0	22	0
Shower	4	3	12
Sink (tap nominal size 15 mm)	70	3	210
Sink (tap nominal size larger than 15 mm)	0	5	0
Spray tap	0	0.5	0
Bidet	0	1.5	0
Domestic appliance	0	3	0
Communal or commercial appliance	0	10	84
Any other water fitting or outlet (including a tap – but excluding a urinal or water softener)	10	3	30
			428

DG5 Equivalent;

428 / 24 = 17.83 (rounded up to 18 units)

13.1.12 At Risk Categories

Properties are placed under one of the following three categories in the DG5 Internal Flooding Register:

1 in 10 – Frequency of flooding once in 10 years; Properties are classified here if either:

- The property has flooded once in 10 years from non-severe rainfall events
- The property has flooded from a single event shown to be less than a 10-year return period storm but more than a 5-year return period storm. (weather report required)

2 in 10 – Frequency of flooding twice in 10 years; Properties are classified here if either:

- The property has flooded more than once in 10 years from non-severe rainfall events
- The property has flooded from an event shown to be less than 5-year return period (weather report required)

1 in 20 – Frequency of flooding once in 20 years; Properties are classified here if either:

- This is the default category for all historical flooding properties coming into the register.
- The property has flooded from an event shown to be less than 20 year return period but more than 10 years. (weather report required)

Properties that have previously flooded and are included in the DG5 Internal Flooding Register but which have since not flooded in the last 10 years during a non-severe rainfall event, will be placed into the 1 in 20 category.

13.1.13 Timing Out

Properties can move between the different DG5 Internal Flooding Register categories, if they have not had a repeat flooding incident over a certain period of time.

Properties at risk of flooding internally due to hydraulic incapacity will move between the flooding register categories on a 'timing out' basis, as follows:

- If a '2 in 10' property does not suffer repeat flooding, caused by hydraulic overload, within 6 years it will be downgraded to '1 in 10'.
- If a '1 in 10' property does not suffer repeat flooding, caused by hydraulic overload, within 11 years it will be downgraded to a '1 in 20'.
-

13.1.14 Restricted Toilet Use

RTU is an NIAUR AIR reporting requirement. Properties suffering from RTU are placed in one of the three categories discussed in Section 4.1.12, and recorded in the AIR.

13.2 Format of Internal Flooding Register

13.2.1 Record Data held on each Property

The records held on each property on GIS will include at least;

- Date of Incident
- Property Address – Property Number, Street Name, Town and Postcode
- Grid Reference
- Sewer Type
- Asset causing flooding incident
- Library of Documented Evidence for addition
    - Field Manager Report, GIS Map, Incident Report, Ellipse Report, Met Office Report (if applicable) and Confirmation of CCTV
- Library of Documented Evidence for removal
    - DG5 Beneficial Use Form

13.2.2 Property and Incident Unique Identifiers

A DG5 incident number is used within the DG5 Internal Flooding Register and all related registers as a unique identifier to distinguish one incident from another.

Structure of DG5 Property and Incident Numbers

- DG5P – corporate indicator that the record is a DG5 Property
- 0000001 – unique seven figure number for each DG5 Property
- DG5I – corporate indicator that the record is a DG5 Incident
- 0000002 – unique seven figure number for each DG5 Incident

The generated seven figure number is unique for both DG5 Properties and Incidents and no two DG5 Properties or Incidents can have the same seven figure combination.

All historic and new DG5 properties will be assigned a DG5 incident number, using the above format. DG5 Property and Incident numbers will be allocated in order of date added to the register.

14 Internal Flooding Register – Periodic Maintenance

Periodically the register should be assessed to check for the following:

- Properties that have been recorded as flooding but have not had a repeat flooding after 10 years will be demoted to the 1in 20 category within the register but they are not automatically removed from the register.
- Comprehensive audits of the DG5 Internal Flooding Register must be carried-out annually (or when necessary) to ensure the information held within is accurate and reflects what has happened throughout the year.

15 Internal Flooding Register – Solutions

15.1 Permanent Solutions

A permanent solution to flooding risk is dependent on the cause. Where the problem can be isolated, a quicker and cheaper permanent solution could be implemented. However, this is not always the case and a permanent solution can take several years to construct due to the solution development, design, and tendering and construction process.

In some cases the cost involved to rectify a problem will far exceed the benefits. This means that where the solution cost exceeds a certain level per property then other action may need to be considered i.e. 'Right to purchase', 'Mitigation' or 'Do nothing' alternative.

A permanent solution will enable a property to be removed from the register.

Permanent solutions can fall into one of the following categories:

- Sewer upsizing and flow attenuation; these types of solutions require a hydraulic model and extensive data collection and analysis to understand the extent of the problem and therefore identify the appropriate cost effective solution.
- Property isolation; if a single or small number of properties are shown to be affected then where the cost of other more traditional solutions far exceed the benefit then isolation may be seen as the most appropriate long term solution.
- Right to Purchase; it is not NI Water's normal policy to purchase a customer's property. However, where there is extreme and persistent flooding the most cost-effective solution may be seek to purchase the at risk property.

15.2 Mitigation and Contingency

Mitigation will be considered where the costs of capital schemes are high or where permanent works are not planned in the short term. Where it is appropriate to do so, mitigation measures can offer customers some degree of protection against internal flooding from the public sewerage system i.e. reduce the frequency of incidents.

Mitigation measures can be applied to either persistent internal flooding or where there is severe flooding to sensitive areas. However, mitigation measures will not enable a property to be removed from the register. Where a property has flooded as a result of failure of a mitigation device it should be reported as equipment failure.

Properties with mitigating measures installed to prevent internal flooding will be defaulted into the 1:20 category of the DG5 Internal Flooding Register and will be prioritised accordingly for solution.

15.3 Prioritisation and Cost Benefit Analysis

The company does not at present carry out cost benefit analysis on DG5 projects. However to allow prioritisation of schemes the process set out below is proposed.

- Review of existing CWP to ensure DG5 related programmes of work are captured.
- Assessment of DG5 Register to develop prioritisation methodology relative to frequency and impact.
- Receipt and analysis of feasibility studies to compliment prioritisation matrix including cost details.
- Review to ensure alignment with Regulatory Reporting on AIR and CIM returns.

16 Internal Flooding Register – Removals

A DG5 Property can be removed from the DG5 Internal Flooding Register when one of the solutions described below has been implemented. This will usually be triggered by construction of a CWP Scheme, or new information on the causes of historic events. Removal of a property from the register can only be done through a formal business process and where there is a justifiable reason, supported by sound evidence.

These properties will have supporting documentation to demonstrate that the grounds for removal have been met. This evidence will be presented to the DG5 Panel for formal removal of a property. Solutions to be considered before property removal from the register can be approved include;

- Permanent Solution; where a permanent solution has been constructed and is in beneficial use, the Capital Programme Team will present a DG5 Beneficial Use Form to the DG5 Panel as a record of confirmation of the flooding scheme completion. This will include the properties to be removed and cost of solution apportioned to flood prevention. The Beneficial Use Form will be approved by the DG5 panel members, and the identified properties removed from the DG5 Internal Flooding Register. They will in turn be re-categorised as removed due to 'company action'. The property will remain in this category of the register indefinitely or until such a time as the property floods again.
- Minor Works; where there has been evidence of asset deterioration, e.g. subsidence or through third party interference and a minor asset improvement project has been completed to rectify the flooding issues. Evidence that the flooding has been resolved will come from the appropriate FM and signed off by the DG5 Panel members.
- Better information - Severe weather; the event causing the property to be on the DG5 Internal Flooding Register is confirmed to have > 20 year return period (i.e. severe) and supported by appropriate meteorological or DAS investigation data.
- Better information - Flooding due to Third party; where investment on the sewer network would not prevent a repeat internal flooding incident and NI Water does not have responsibility for the problematic sewer the properties should be removed from the DG5 Internal Flooding Register. The details should be recorded in the AIR commentary. However, if the responsibility for the problematic sewer is shared with NI Water, then the property remains on the Register.
- Better information - Flooding is due to other causes; where it can be confirmed that flooding has occurred due blockage, collapse or equipment failure details will be recorded as 'other causes' within the excluded section of DG5 Internal Flooding Register.

Note: Mitigation will not enable a property to be removed from the register.

Finally, errors can happen;

- Error, identified by Audit or Investigation. Where an error can be clearly shown to have occurred, then the property can be removed.
- Operational improvements are an unlikely explanation for justifying removal of properties from the register. Therefore any supporting data must be robust, for example, CCTV data. In the case of permanent solution then the property would be removed.

17 Annual Information Returns

The DG5 Internal Flooding Register will contain the information required to prepare Table 3, of AIR. The information required for the AIR will be retrieved from DG5 Internal Flooding Register.

- AMS will report on internal flooding incidents due to hydraulic incapacity held in the DG5 Internal Flooding Register.
- NSBU will report on internal flooding incidents due to other causes held in the 'excluded' section of the register
- AMS and NSBU will collaborate closely when compiling the AIR for internal flooding.

Appendix 1 – **Asset Performance Customer Questionnaire**

Northern Ireland Water
Asset Performance
Asset Management
Westland House
Old Westland Road
BELFAST
BT14 6TE

Tel: 08458 770002
Fax: 028 2566 3131
Email: w.moffett@NI Waterater.com
www.NI Waterater.com

Owner/Occupier

Email

Your Ref

Our Ref

Date

Dear Sir/Madam

SEWER FLOODING AT THE ABOVE ADDRESS

I refer to your complaint of sewer flooding on, and would be very grateful if you could help me with the following pieces of information:

- Was the flooding internal (e.g. in the house or attached garage) or external?
- What was the cause of the flooding?
- Has it been resolved by Northern Ireland Water or others?
- What way was it resolved (if known)?
- If it is still occurring, when did it last happen?

Could you please respond by calling me on my mobile (xxx) or emailing me. Your assistance in this matter will be much appreciated.

Yours faithfully,

[redacted]
Asset Performance

Appendix 2– **Asset Performance DG5 Determination Report**

	ASSET PERFORMANCE DG5 DETERMINATION REPORT
Name and Address (Add BT Code)	

Incident Date	
Flood Type	
Rainfall Report	
Ellipse Notes	
CEMS Notes	
Customer Comments	
F.M. Comments	
Restricted Toilet Use	

Other Information Sources e.g. Pollution Reports, WWPS alarms, Captrax, Flooding Incident Reports, CCU etc.;	

GIS Assessment	
Existing Sewer Details	
Type of sewer	
Diameter (mm)	
Material Type	
Year Laid	
Sewer Location	
CCTV Carried Out	
Sewer Desilted	
Comments	
Topographical Assessment	

Possible Number of Other Properties Involved	

Flooding Mitigation (NRV's etc. ;)	
Drainage Area Catchment	
D.A.S.is Network Model Available	
DAS is there Predicted Flooding	

Summary	

Determination	

Signed	

Date	

Appendix 3– **DG5 Flooding Incident Report**

Northern Ireland Water – Flooding Incident Report

Work Order Ref No: ___ Name: _____

Location: _____

Date: _____ Arrival time: _____

1) Internal Flooding: ☐

Main Sewer	☐	Lateral Sewer	☐
Adjacent properties flooded	☐	Attached garages flooded	☐
Basements/Cellar flooded	☐	Restricted Toilet use	☐
Kitchen	☐	Hallway	☐
Living room	☐	Dining room	☐
Shop/integral store	☐	Downstairs bathroom	☐

2) External Flooding: ☒

Main Sewer	☒	Lateral Sewer	☐
Public road/footpath	☐	Public area	☐
Agricultural land	☐	Curtilage	☒
Detached garage flooded	☐	Detached shed or store flooded	☐

3) Comments on cause of reported incident: (Select only one category below)

Blockage	☒	Collapsed sewer	☐
Defective road gulley	☐	Defective private drain	☐
M&E equipment failure	☐	Other:	

4) Clean up operations:

Not Required ☐ Further Action Required ☐ Completed ☒

5) Previous History:

Yes ☐ No ☒ Not Aware ☐

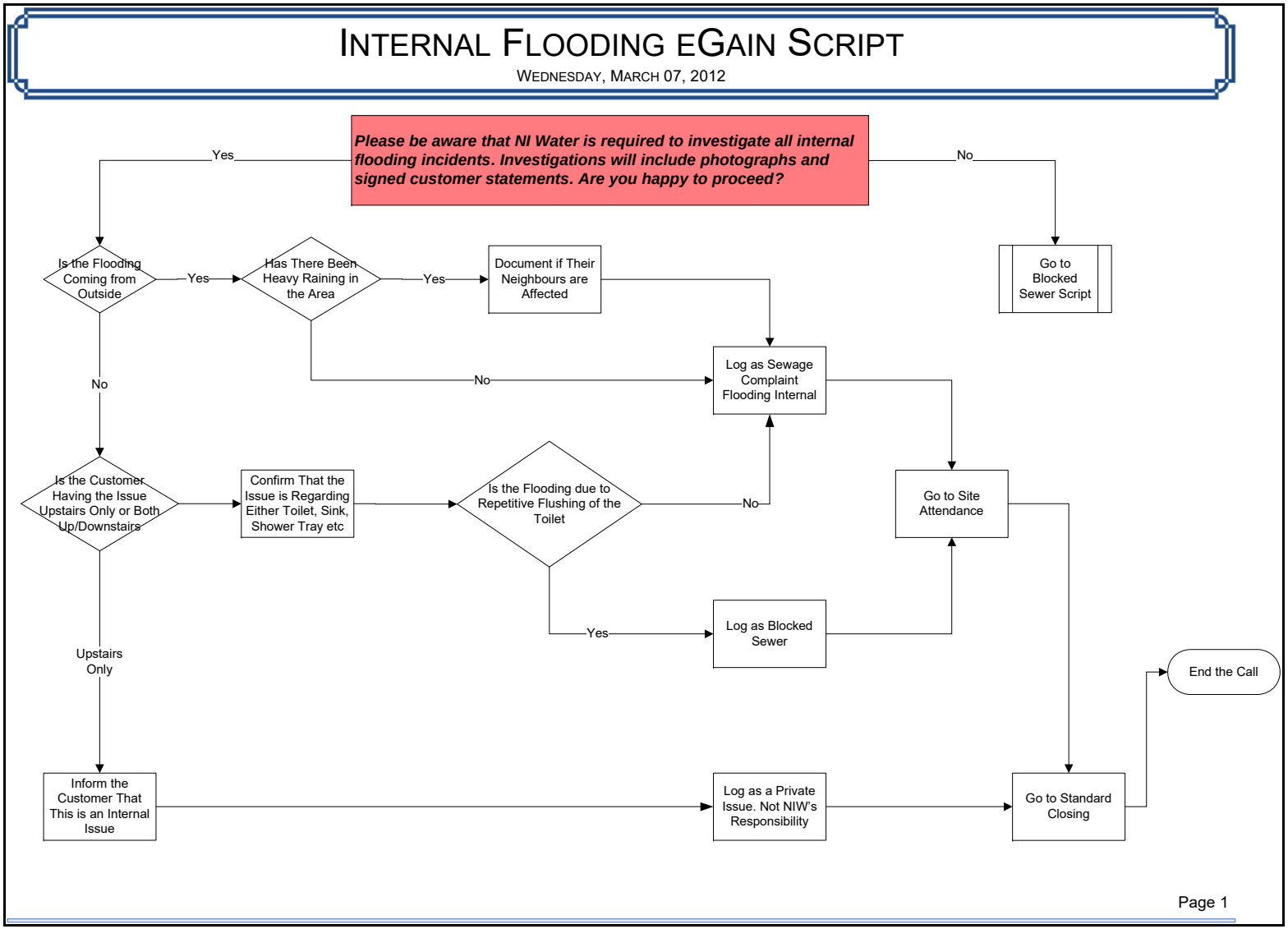
6) Weather Conditions:

Dry ☐ OR Wet ☒: Heavy ☐ Medium ☐ Light ☒

Comments: Especially for Flooded jobs or Follow on jobs

PHOTO FOR FLOODED JOBS:

Appendix 4– **Call Centre DG5 Caller Script**


INTERNAL FLOODING EGAIN SCRIPT
WEDNESDAY, MARCH 07, 2012
Please be aware that NI Water is required to investigate all internal flooding incidents. Investigations will include photographs and signed customer statements. Are you happy to proceed?
Yes
No
Is the Flooding Coming from Outside
Yes
Has There Been Heavy Raining in the Area
Yes
Document if Their Neighbours are Affected
Go to Blocked Sewer Script
No
Log as Sewage Complaint Flooding Internal
No
Is the Customer Having the Issue Upstairs Only or Both Up/Downstairs
Confirm That the Issue is Regarding Either Toilet, Sink, Shower Tray etc
Is the Flooding due to Repetitive Flushing of the Toilet
No
Go to Site Attendance
Yes
Log as Blocked Sewer
Upstairs Only
End the Call
Inform the Customer That This is an Internal Issue
Log as a Private Issue. Not NIW's Responsibility
Go to Standard Closing
Page 1

Copy of DG5 Register

1	Project No	Scheme Title	GIS CODE	Address	Post Code	Register	Scope of Work	Feasibility Da	PC Year
2	KR444	Sydenham Upgrade (Interceptor Sewer)					Major Scheme regarding building a tunnel in East Belfast and also side works. Feasibilty on going.		PC21
3			DG5P0002528	[redacted]	[redacted]	1 in 20			
4			DG5P0002529			2 in 10			
5			DG5P0003700			2 in 10			
6			DG5P0003663			2 in 10			
7			DG5P0003664			2 in 10			
8			DG5P0003665			2 in 10			
9			DG5P0002667			2 in 10			
10			DG5P0003784			2 in 10			
11			DG5P0003781			2 in 10			
12			DG5P0003782			2 in 10			
13			DG5P0003701			2 in 10			
14			DG5P0003702			2 in 10			
15			DG5P0003559			2 in 10			
16			DG5P0003014			2 in 10			
17			DG5P0003699			2 in 10			
18			DG5P0003789			2 in 10			
19			DG5P0003666			2 in 10			
20			DG5P0003667			2 in 10			
21			DG5P0000045			1 in 20			
22									
23			DG5P0003668	[redacted]	[redacted]	2 in 10			
24									
25	KR444	Stand Alone Scheme.	DG5P0000131	[redacted]	[redacted]	1 in 20			
26			DG5P0000191			1 in 20			
27									
28	KR442	Glenmachan Street, Belfast					Feasibility Study being carried out.	29/08/2014	PC21
29			DG5P0000629	[redacted]	[redacted]	1 in 20			
30			DG5P0000630			1 in 20			
31			DG5P0003763			2 in 10			
32			DG5P0002659			2 in 10			
33	KR500	Glenmachan Greystown Ave/Upper Malone Road, Belfast					Feasibility Study being carried out.	30/05/2014	PC15
34			DG5P0000004	[redacted]	[redacted]	2 in 10			
35			DG5P0000634			2 in 10			
36			DG5P0000635			1 in 20			
37			DG5P0003762			1 in 20			
38			DG5P0000640			2 in 10			

Sheet2

Northern Ireland Water

Level of Service Methodology

DG6 Response to Billing Contacts

DG6 RESPONSE TO BILLING CONTACTS

Methodology and Procedures

Northern Ireland Water (NIW) has contracted out the provision of Customer Billing and Contacts (CBC) to Echo Managed Services (Echo). Echo is the provider of CBC services to NIW.

DG6 response to billing contacts (Process Summary):

1. Telephone Contact (go to step 4) or Documentation received (in Capital House)
2. Documentation opened by the Echo Payment Processing Team and passed to the NIW Account Services Customer Support Team
3. Scan and Index (documentation only which is archived after scanning)
4. Raise and allocate CMS contact type
5. Assess and Investigate
6. Update and compose response

All customer response letters are printed by NIW Account Services Contacts Team and dispatched locally. Exceptions to this include correspondence generated through DSTI which are bills (including recalculated bills) and automated recovery letters / correspondence. The process for printing and distribution of bills and other stationery on a daily basis is detailed below:

Items generated in Rapid:
Information received and updated by the agent, (which automatically updates the system), may trigger the system to create an item of stationery. The agent can also take a course of action (which will manually update the system) and may also trigger an item of stationery. This may include receipt of a leakage form from the customer, Data Protection Letter, Transfer of Responsibility etc. All such contacts are recorded as closed as at the date of dispatch.

The BSA team, within Echo, reconciles numbers of bills, letters and forms and sends all relevant items of stationery created the previous day through to DSTI for printing. These are signed-off, printed, enclosed and prepared for pick-up by TNT. Currently only bills, recovery notices and letters are handled this way. For DG6 reporting purposes the date of resolution of the item or date of the substantive response is used as the closure date.

Definitions

A billing contact covers any communication from a customer or their representative (on receipt of written permission from the customer as per data protection) regarding a customer account that requires a response or an action by NIW and does not constitute a written complaint. A customer's representative may be a solicitor, Citizens Advice Bureau, local MLA, or stakeholder representative, e.g. Ulster Farmers Union or CCNI.

Billing contacts can be received by telephone, in writing, by e-mail, by fax, by personal visit or written on a piece of company correspondence, for example a bill that is returned to NIW. Offensive or abusive written contacts are not included.

A billing contact not received in writing is a DG6 event. A written communication however, may be classified as a DG6 or DG7 event. Where the content or tone of written communication indicates an element of dissatisfaction, however mildly worded or unjustified, it should be classified as a written complaint and reported under DG7.

Billing contacts include calls that are made to pay a bill, as this will result in an action being taken on the customer's account.

Email / Faxes: When an e-mailed, faxed or hand delivered contact is received after 16:30 it will be scanned, logged and indexed on the next working day. The date of receipt recorded will match the actual date of receipt.

Emails and faxes, which can be sent at any time, that are received outside or normal operating hours shall record the receipt date as the date it was delivered to the company. For example, if an email is received on a Saturday this is recorded as day 0. The next working day (Monday) would be counted as day 1. If an email is received on a Sunday then this is recorded as date of receipt – day 0 and Monday as day 1.

Exclusions

A query relating to billing for domestic customers, including the provision of meters is not a DG6 contact, as domestic customers are not billed by NIW.

For reporting purposes, other exclusions are:

- Written complaints (these are handled as DG7);
- Correspondence from banks re direct debits (clarified with NIAUR as excludable);
- Contacts logged in error;
- Freedom of Information requests;
- Calls relating to septic tanks and septic tank payments (these are non-appointed);
- Calls relating to new connections, not yet completed; and
- Copy correspondence from and to NIW personnel.
- Correspondence relating to payment processing, e.g. BACS notifications, payment giros and remittance advice notes.

Multiple Accounts

NIW received clarification from the Regulator as to how contacts from customers with multiple accounts should be logged, so as not to over or understate the DG6 position.

Therefore, for reporting purposes, a DG6 contact received by a customer holding multiple accounts with NIW that is requesting an update to their standing account details will be recorded as 1 DG6 event on 1 account and as a non-reportable event on the remaining accounts.

End of year (contacts not dealt with at end of year)

As per NIAUR guidance, if a billing contact is not resolved by the time the year end report is run, the contact is included in the total number of billing contacts received for the year in which it is received.

The contacts that are open at end of year are included in the reported figures for the number dealt with within 5 working days. This is based on the assumption that a holding response has been issued within 5 working days and that the reported date of closure will, at the point of final resolution, be backdated to the date on which the holding response was issued.

It was later verified that, per the assumption above, each of those contacts still open at yearend were closed in line with the aforementioned methodology with a reported closure date within 5 working days of receipt.

Further, the response time for any open billing contacts received within the reporting year is reported to be within 5 working days based on the assumption that a substantive holding response has been issued for each by working day 5. On resolution of the billing contact, these billing contacts will be closed back to the date of the holding response. A sample of 60 of the 307 open DG6 contacts were checked to see if they had a holding letter issued on or before working day 5 and 100% of the 60 sampled did.

Auditing

Internal Audits – This process falls within Echo's Quality Management system and is audited several times a year under ISO9001/2000.

Performance and the achievement of Billing enquiries are recorded as per the Contact Handling Expected Service Levels which are measured monthly in accordance with *Contract Schedule 2.2*. Detailed monthly monitoring reports of actual performance are generated by Echo within CorVu and presented in the monthly Business Review Pack (MBRP) to NIW within 5 working days of the end of each month covering lines 1.1.1 to 1.1.9 in accordance with schedule 8.4.

Validation of DG6 figures provided by Echo are carried out monthly by NIW in accordance with *Contract Schedule 2.2* and recorded in the "NIW Response to the Monthly Business Review Pack" document, which is published for comment and review. Any discrepancies on monthly DG6 performance are raised with Echo and escalated.

Echo regularly performs quality reviews against contacts received to ensure contacts are dealt with correctly. Although no documentation is made available to NIW, regular reviews are carried out by Team Managers within Echo, including:

- Weekly call listening;
- Monthly scoring based on call listening and feedback to individual agents;
- Coaching and feedback; and
- Daily monitoring of all billing contacts with team feedback when necessary.

NIW conduct monthly bill accuracy checks and report their findings to Echo by randomly selecting 100 bills issued each month and analysing them for accuracy, including:

- Accuracy of standing charges, sewerage and water charges;
- Bill total agrees with supporting pages;
- Correct application of VAT;
- Customer details are correct; and
- Correct bill type is used.

Any discrepancies are logged and sent to Echo for review.

NIW Contract Office performs a call listening exercise on a monthly basis. Each month a random selection from the total calls received is made. This selection includes both billing and operational calls. Billing calls are assessed for:

- For accuracy;
- To determine if memo contents are clear and precise;
- To ensure the conversation is accurately recorded on Rapid; and
- To ensure correct use of CMS code.

Any findings are reported back to Echo management through the Response to the MBRP.

An end to end process review is carried out by internal audit.

Sources of information

System used

The telephony system comprises of a suite of Avaya products and a Call Media ACD. The Avaya switch is tightly integrated with the Call Media platform, which provides CTI (Computer telephony Integration) and ACD (Automatic Call Distribution). Calls can be automatically routed to appropriately skilled agents ensuring a quality response to the customer, at first point of contact. NICE is the call logging system.

The software comprises of Call Media Enterprise Console with an integral reporting suite, which distributes calls based on skills sets and SLA's.

Written correspondence is date stamped at point of receipt by Echo (unless received after 16:30), scanned on a (Kodak i 620 scanner) and indexed. This safeguards security and minimises administration. Once correspondence is scanned, it is indexed and batched with an allocated batch number. The scanned image is then available to Rapid Users.

All contacts received should be recorded on Rapid. Reports from CorVu are generated by Echo, validated by NIW, and are used to report on DG6 performance.

Actual data

Actual data is extracted from the billing system RapidXtra using CorVu. CorVu 'DG6 Received QRY (Live)' is used to calculate the total number of DG6 contacts received (table 4, line 1) and to calculate the DG6 closed performance (table 4, lines 2-5). DG6 data analysis is produced monthly and re-run for the entire reporting year, providing the necessary information essential for the Director General's reporting requirements.

Sampling

Actual data is used to report DG6 performance (table 4, lines 1-5). Sampling is only used by NIW for data quality purposes and to provide comfort around the assumption that DG6 contacts open at year end will be closed back to a holding letter issued on or before working day 5.

Reliability

All data is taken from the main billing system to ensure it is reliable and accurate.

Responses

This is defined as a response to a billing contact, which may be by telephone, written correspondence or personal visit. Responses will provide the following:

An explanation of NIW's relevant policy or procedure and indicates why, in NIW's opinion, no further action on the customers billing contact is required; or

Informs the customer when action on his/her account will be taken if action cannot be taken immediately due to circumstances beyond NIW's control, for example, customer needs to obtain clearance from third party, such as a landlord.

Whichever type of response is dispatched it must substantively answer all points raised by the customer and be recorded and date stamped.

Use of telephone

The telephone is the company's preferred method of responding to a billing enquiry. All DG6 related telephone calls should result in a CMS memo being raised and coded by the

agent according to the individual enquiry. An audit trail of the response will be recorded on the billing system (Rapid) as a memo with a CMS type. A full record of the actual conversation and its outcomes is held on Call Media. A CMS is created on Rapid and contains information including:

- CMS type;
- Customer name;
- Customer address;
- Telephone contact;
- Query details; and
- Action required.

Use of letters

Letters are only used when it is not possible to deal with the customer by telephone, when a written reply has been requested by the customer and when it is deemed more appropriate by the agent. Telephone calls not dealt with at first point of contact are dealt with by the NIW Account Services department. A CMS is created on Rapid and contains information including:

- CMS type;
- Customer name;
- Customer address;
- Telephone contact;
- Query details; and
- Action required.

Holding letters are sometimes used but are customised by the agent. They are held within Rapid and are posted directly to the customer and not through DSTI.

Use of personal visit

If a DG6 contact requires a personal visit, (e.g. a meter query team site visit), the agent will raise a CMS contact. This will be transferred to the NIW Account Services Contact Team who takes ownership for resolution and closure of the contact. The Contacts Team agent will send a holding letter to the customer once the visit request has been raised. It is this date/time of this letter that is used for closure.

Response time

This is the number of working days between receipt of a contact by NIW up to and including the day of despatch of a response. For the purpose of this calculation, the day of receipt, provided it is a working day, is counted as day zero and the next working day as day one.

Emails and faxes, which can be sent at any time, that are received outside or normal operating hours shall record the receipt date as the date it was delivered to the company. For example, if an email is received on a Saturday this is recorded as day 0. The next working day (Monday) would be counted as day 1. If an email is received on a Sunday then this is recorded as date of receipt – day 0 and Monday as day

CCNI

Written billing contacts received via the Consumer Council for Northern Ireland (CCNI) office on a customer's behalf are included.

Holding reply

This is defined as a response to a billing contact which advises the customer that NIW will need to undertake additional research or other actions before being able to respond to the customer's contact. A holding reply is counted as a substantive response if it informs the customer what further action needs to be taken to respond to the query and includes a date by which investigations or further actions will be complete and by when the customer will receive a further communication from NIW.

A holding reply will close a contact for DG6 reporting purposes but not for NIW until all actions have been taken. NIW provides a reply within 5 working days of the customer contact and a further holding letter is sent, if there is a delay in finding a resolution. The company will include the number of days in which they will contact the customer again. Enquiries and follow up questions will not be counted as a DG6 contact.

Other Issues

Please refer to DG6 Company Commentary.

Northern Ireland Water

Level of Service Methodology

DG7 Response to Written Complaints

DG7 METHODOLOGY 2016/17

Methodology and Procedures

Northern Ireland Water (NIW) has contracted out the provision of Customer Billing and Contacts (CBC) to Echo Managed Services. Echo Managed Services (Echo) are the provider of CBC services to NIW. Written contacts and complaints are dealt with in-house by the NIW Customer Services Centre function. The Account Services (AS) Customer Support Team within this department scan, log & index documentation whilst the AS Complaints & Exec Mail Team case-manage and respond to DG7 complaints.

The following high-level process steps are followed:

- documentation received (in Capital House);
- documentation opened by Payment Processing (Echo) who separate payments & non-customer documentation before passing the remainder to the Account Services department;
- documentation sifted into DG6, DG7 and non-reportable categories;
- documentation date stamped, scanned, logged & indexed by AS Customer Support Team;
- CMS contact raised to the NAS Account Services inbox in RapidXtra (Customer Billing & Contact Management System) and case raised in Savvion (BPM solution);
- contacts allocated to AS Complaints & Exec Mail Team members;
- AS Complaints & Exec Mail Team member assesses, investigates and case-manages complaint as appropriate;
- request for information and/or action sent to relevant part of the business then;
- review information provided by business, update accounts, draft & issue response.

Allocation to DG7

Written complaints are recognised from all other correspondence by following the definition of a written complaint as set out in the Reporting Requirements and Definitions Manual. All incoming written correspondence is passed to Account Services. It is then sifted and categorised as DG6, DG7 or non-reportable according to the Utility Regulator's definitions. Following that, it is date-stamped, scanned, logged and indexed by the AS Customer Support Team.

The reported response times for all written complaints are derived from the Rapid database. All written complaints, with the exception of exclusion categories detailed herein, are included in this total.

Definitions

A DG7 complaint is defined as any written communication from a customer or customers' representative (e.g. Citizens' Advice Bureau, solicitor), alleging action or inaction, or service or lack of a service on the company's part or that of its agent or contractor has fallen below the expectation of the customer – even if written in mild and friendly terms. This includes any expression of annoyance or dissatisfaction by the customer, or disagreement with the company.

Written complaints include letters, e-mails and faxes.

Also included are:

- second or subsequent complaints;
- general complaints;

- complaints that may seem unfair or frivolous;
- complaints received by Consumer Council for Northern Ireland and;
- complaints written on returned Company letters or stationery (e.g. bills).

Should the Company receive a petition, it is classed as a DG7 contact and the Company will respond only to the customer who has sent in the petition. This will be classed as one complaint although the complaint and the response letter will be archived against the account of each customer that has signed the petition where practical.

Exclusions

The following are excluded from DG7:

- cheques and stubs;
- written DG6 billing queries;
- all other Company mail;
- complaints that are sent anonymously;
- complaints that are offensive or abusive;
- complaints referring to non-appointed activities;
- complaints returned alongside customer satisfaction surveys;
- complaints not about the services and functions of the Company (e.g. complaints about executive salaries, advertising campaigns);
- complaints about the activities of other utilities (for example signage around trenches);
- complaints about recreational and amenity activities not defined as duties imposed by the Water and Sewerage Order 2006 and;
- public liability claims (although any related complaint should be included as normal).

End of Year (contacts not dealt with by end of year)

As per NIAUR guidance, if a complaint is not resolved by the time the year-end report is run, the complaint is included in the total number of complaints received for the year in which it is received.

Further, the response time for any open complaints received within the reporting year is reported to be within 10 working days based on the assumption that a substantive holding response has been issued for each by working day 10. On resolution of the complaint, these complaints will be closed back to the date of the holding response.

Auditing

This process falls under the remit of NIW Internal Audit (IA). A “Customer Contacts and Complaints Handling” audit was undertaken during 2016/17. This resulted in a number of recommendations from Internal Audit in respect to complaint handling including:

- reminding staff that sensitive or urgent complaints should be appropriately escalated and prioritised for resolution;
- measuring the time taken to seek action/input from around the business from the point of complaint allocation;
- reminding staff of the need to ensure the customer has received a full response addressing all their concerns before the complaint is closed; &
- ensuring that appropriate focus was being given to the standard of content used in holding responses.

NIW MI & Data Team carry out monthly sampling to quality check that contacts are being logged correctly within the Rapid system. The checks include validation that the contact is

a DG7, confirmation that the CMS codes are correct, that the date of closure is correct and that the response issued is substantive. Any areas of concern are then fed back to the relevant teams who provide a written response with agreed actions.

Each complaint also undergoes a series of quality assurance checks. The first is carried out by the AS Complaints & Exec Mail Team member who has the item allocated to them. They check that the item has been:

- correctly categorised as DG7;
- coded using an appropriate CMS code; and
- logged to the correct account(s).

The AS Complaints & Exec Mail Team member verifies that the information received from within the business is suitable to use in response to the complaint before the response is drafted.

Once the response has been drafted, it is subject to a self-assessed Quality Assurance check during which adherence to an agreed Letter Writing Checklist is tested.

The Complaints & Exec Mail Team Manager/Supervisor performs further monthly sampling of contact categorisation to ensure accuracy. These additional monitoring systems check:

- DG7 categorisation;
- CMS code; and
- advice code for closed complaints (existence of and; accuracy of).

Sources of Information

Complaints are sorted into the relevant categories, date-stamped, scanned, logged then indexed, thus ensuring security and minimising administration.

Each complaint received is scanned using the Kodak i620 scanner. At the end of each “batch” of correspondence scanned, a batch number is allocated. The images can then be seen by staff on their PC and indexing can begin. During indexing, the following details are input by the operator:

- property and/or customer reference;
- date of receipt;
- CMS group;
- CMS description;
- document type and;
- operator id.

It is at the indexing stage that the scanned items are categorised, thus allowing the description to be input above.

Changes in system during the reporting year

There were no changed in system during the reporting year.

Actual Data

Actual data is extracted from the billing system RapidXtra using CorVu. CorVu ‘DG7 Received QRY (Live)’ is used to calculate the total number of DG7 contacts received and to calculate the DG7 closed performance. DG7 data analysis is produced monthly and re-run for the entire reporting year, providing the necessary information essential for the Director General’s reporting requirements.

Sampling

Sampling is not used in compiling received data for DG7. Sampling is only used by NIW for data quality purposes.

Reliability

All data is taken from the main billing system to ensure that it is reliable and accurate.

Responses

Upon receipt of a complaint, we ensure that relevant action is undertaken, provide a substantive response and ensure the contact is closed on the Customer Contact Management System (Rapid).

NIW endeavours to answer all written complaints, regardless of the sensitivity of the issue or subject raised by the customer.

Our responses do one or more of the following:

- provide an explanation of our policy or procedure and indicate why no further action is required;
- inform the customer that action to resolve the complaint has been taken and identifies when this action occurred;
- informs the customer when the action to resolve his/her complaint will be taken if it cannot be done immediately e.g. capital works scheduled for completion months sometime in the future;
- answer all issues or questions raised by the customer.

Use of Telephone

Where appropriate, telephone calls are used to respond to written complaints. Telephone calls are also used to update customers as the progress of complaints under investigation. The customer account is annotated with details of the call in these cases.

Use of Standard Letters

Standard letters are not used to respond to complaints - all responses are personalised and customised.

Use of Personal Visit

When a personal visit is used to respond to a written complaint, a letter confirming the content of the visit is provided to the customer. The date of the visit is used as the date of response.

Assumptions:

NI Direct

Complaints received through NI Direct are not reported.

Telephone Complaints

Complaints received via telephone are reported as DG9 telephone complaints, not DG7. Billing telephone complaints are reported as DG6.

Date of Receipt

Written complaints are date-stamped per the date of receipt.

Date of Dispatch

The date of dispatch refers to the date on which a response is sent to the customer. The date of dispatch is recorded as the date closed.

Response Time

This is the number of working days between receipt of a contact by NIW up to and including the day of dispatch of a response. For the purpose of this calculation, the day of receipt (provided it is a working day) is counted as day zero and the next working day as day one.

When an email or fax is received after 16:00, it will be scanned, logged and indexed on the next working day. The date of receipt recorded will match the actual date of receipt.

The reported date of receipt for emails/faxes received outside of normal operating hours is the actual date on which the complaint was delivered to the company. For example, if an email is received on a Saturday, this is recorded as day zero. The next working day (normally the Monday) would be counted as day one. If an email is received on a Sunday then this is recorded as date of receipt (day zero) and (normally) Monday as day one.

Substantive Holding Reply

This defined as a response to a written complaint that advises the customer that NIW needs to undertake additional investigations or other actions before being able to provide a full response. A holding response is considered substantive if it advises the customer what further action needs to be taken in order to fully respond, when this will be done and when they will receive a further communication from NIW.

Items remain open until all actions have been completed but will be closed back to the date of the holding response for reporting purposes when said actions have been completed.

When a date by which investigations or further actions will be complete cannot be given, we will give the date by which we will contact the customer again.

Holding responses can be issued in writing or provided verbally by telephone.

Repeat Contact

Where a complaint has been responded to and results in a period of correspondence each written contact is treated as, and reported as, a separate complaint.

This is done even if NIW consider the complaint has been dealt with as far as we are able.

Consumer Council for Northern Ireland (CCNI)

Complaints received in writing via CCNI will be logged as complaints and recorded in DG7 figures. All complaints from CCNI are received in writing.

CCNI enquiries and follow-up questions are not recorded as complaints.

Complaints to or about Contractors

Complaints made directly to contractors about work carried out on our behalf are recorded following notification to NIW through agreed process. Such complaints will be recorded even they are handled directly by the contractor.

Complaints about contractors received directly by NIW are reported even if they are referred to the contractor to deal with.

Holding Response & Frequency

Monitoring systems have been in place throughout the reporting period to support recording on the number holding responses issued throughout 16/17.

System-based report data was used to derive the number of holding responses issued between 01/04/16 and 31/03/17.

In cases where the investigations were on-going by the expiry date of the initial holding response, a further holding response will have been issued.

Based on the recorded data, we can say that one (or more) holding response was sent in relation to 272 DG7 contacts that were received in 16/17. Therefore, it can be concluded that one or more holding response was issued in relation to 11.45% of the DG7 contacts received during 16/17.

Other Issues

Please refer to the DG7 Company Commentary.

Northern Ireland Water

Level of Service Methodology

DG8 Bills for Metered Customers

DG8 - BILLS FOR METERED CUSTOMERS

Definitions

Every time a metered account is billed, a reading type is updated onto the Rapid billing system (Rapid) to identify the type of reading.

The reading types and estimated indicator are used to distinguish the meter reading status of each metered account, which is subsequently analysed in Rapid to create the 'DG8 Meter Summary Analysis' report.

DG8 Reporting

The Rapid 'DG8 Meter Summary Analysis' report ensures we correctly identify each of the reporting requirements in the sequence shown.

The reading indicators are extracted from Rapid RPU005 meter consumption update screen. The 'DG8 Meter Summary Analysis' report extracts this information and compiles this in line with the requirements.

The report is run annually at the end of the financial year, covering the period 1 April to 31 March and includes all categories requested by the Director General for the June Return reporting.

A bill is only counted as issued if it is sent to the customer within the reporting year. Any bills that are sent after this date will be included in the following reporting year's figures.

Total Metered Accounts

The report confirms the number of active accounts with either water or water and sewerage consumption that are metered.

Company Reading and Billed

If a Company reading has been taken during the within the defined annual cycle period, and a bill created against that reading, it will be included under the 'Meters read by Company' indicator. The exception to this is those meters that are billed outside of Rapid (trade effluent meters).

Company readings are recorded by the Meter Reader (MR) via a PDA. Each day the MR will upload those accounts that have had a reading and or an abnormal reading from the PDA to Routestar/Temetra, for transfer to Rapid. The Temetra system was introduced on 26th August 2014 to replace Routestar.

No Bills Received During Reporting Year

Bill status is scanned for no bills issued during the reporting year and is reported under the 'Not Billed this year' indicator.

Meters included in this category are identified as having a reading entered but the 'bill sent' flag set to 'No'

Customer Readings

Reading types are scanned for not receiving a bill based on a Company Reading but at least one bill based on a 'Customer Reading' and will be included in the 'Meters read by Customers' indicator.

'Meters Read By Customer' represents the number and percentage of the meters read by the customer within the DG reporting year that are identified as either 'Customer read' or 'Customer web reading'

The Company encourages our customers to take readings themselves so that they are aware of their usage. Customer reads can be registered for billing purposes by using the On-line facility available on our website or by calling our billing line.

Customer readings are recorded via a correspondence management system. A team member will then update the account and issue a revised bill. A customer reading type indicator will be displayed on the system. The estimated read will also be visible on the system

Estimated Only

Any meters that have not satisfied any of the preceding indicators will be recorded under the 'Meters Estimated Only' indicator.

'Meters Estimated Only' represents the number and percentage of meters only estimated within the DG reporting year. The following read types are identified as estimates: Estimate Exchange Final, System Estimate, and Manual Estimate.

Unread for Two Years

If no Company reading exists during a two year period, it will be reported under the 'No Company Reading for 2 Years' indicator.

Specifically two years back from the end date of the DG report.

Exclusions

The following are excluded from the indicators:

- Charged on another basis (not metered consumption)
- Test meters
- Trade-effluent meters
- DRD or NIW meters
- Fire supplies
- Properties occupied continuously for less than six months
- Complex accounts – Including combination meters i.e. the 'low-flow' element is excluded.
- Void properties

Reading and Billing Frequency

Frequency of reading:

- Non-household properties are scheduled to be read twice a year. The reading schedule for each read is completed over a six month period, the 1st read cycle is April to September and the 2nd read is October to March.
- Non-household – large volume users are read and billed monthly.
- There are a number of meters that have been assigned a reading frequency of Annual Read within the Rapid system. However, these meters are either DRD Supply or Test Meters which fall under the permitted exclusions and will only be read to assist business requirements, as neither category generates a customer bill.

Frequency of Bill Issue:

- Household properties – the Company do not currently bill domestic properties
- Non-household – the Company aim to read at twice a year and bill twice yearly.
- Large non-household users – the Company aim to read and bill monthly.

Method of Meter Reading

Before the start of each reading period, whether monthly or six monthly, details of metered accounts scheduled for reading were transferred from Rapid to Routestar between April and 25th August, and from Rapid to the Temetra system for 26th August onwards.

The accounts are then downloaded on to an electronic data storage unit (PDA) to facilitate the actual reading of the accounts by a MR in the field.

The meter reading information obtained by the MR is then transferred back to Rapid from Routestar/Temetra, which is subsequently updated upon the meter being read.

The data transfer from Routestar/Temetra to Rapid is not solely automatic and currently requires manual assistance by the MAM team.

Abnormal Readings

An abnormal reading can be identified by one of two factors:

- A meter reading that gives a usage that does not fall in line with previous usage patterns, identified by the MR, billing system or customer.
- A meter reading that does not correlate with previous readings taken.

The PDA unit automatically calculates the usage between a new reading and the previous reading. The MR checks the usage against the previous readings that are displayed on the PDA. If the usage appears to be abnormal the MR will enter a report onto the PDA and or use a pre-set indicator to explain why (trouble codes).

A daily ‘Rejected Readings’ report is produced through the Rapid billing system that also identifies any abnormal usage that require further investigation. Each account on the report is checked and if accepted the reading will be utilised and a bill issued. If the rejected read cannot be added, a site visit request is raised to instruct a Meter Query Technician (MQT) to investigate and provide further information.

Previous Misreads

Accounts that are identified as having previously been misread are subject to re-calculation based on the most recent meter reading.

Access Denied / Meter Reading Unobtainable

In such instances that the Company is unable to gain access to the meter, a skip code is entered which identifies that access was denied. If the customer does not provide a reading before the billing run a system estimate is used.

Faulty Meters

Where a faulty meter is identified and a MR or MQT replaces the meter, it is recorded on an MRD (Meter Replacement Docket) which their Field Manager (FM) signs off and sends to the MAM team, and “First Read New Meter” is logged on the handheld.

If a MR or MQT cannot replace the meter, a MMR (Meter Maintenance Request) is completed which their FM signs off and sends to the Meter Maintenance (MM) team, MM then forwards the MMR to the Contactor. When the meter has been replaced, the Contractor advises MM of the replacement details. The old and new details will then be returned by MM on a MRD to MAM for updating on the billing system

Updating, Post Bill Issue

If the Company has any disputed readings, the account will be suspended while further investigations are being made. Once the investigations are finalised, a revised bill will be issued if necessary.

Assumptions

Those accounts excluded from the analysis are categorised using the definitions provided by the reporting requirements, as noted above.

Additional Information

Echo, on behalf of Northern Ireland Water, are responsible for the billing activity.

Some meters are billed on a sundry schedule rather than the normal billing schedule within Rapid. These are Trade Effluent bills. Trade Effluent bills are excluded from DG8.

Sewerage only customers, if not TE customers, are charged on an unmeasured basis.

Northern Ireland Water

Level of Service Methodology

DG9 Telephone Contact

Definitions:

Principle Advertised Customer Contact (PACC) Points

For the purposes of the indicator, Principal means the main contact point(s) which customers are encouraged or directed to phone. Advertised refers to Customer Contact Points which are available in telephone directories, newspaper advertisements, Northern Ireland Water (NIW) website and NIW literature. It does not include temporary contact points, which have been established to handle a specific topic.

NIW PACC points include:

- **Billing Enquiries:** 0345 877 0030
- **Debtline:** 0345 8770 050
- **Waterline:** 0345 744 0088
- **Leakline:** 0800 028 2011
- **Text Relay (for customers with hearing difficulties):** Registered users are provided with a prefix for any NIW number they wish to ring.

An MLA/ER Hotline [redacted] was initiated on 21st August 2007 to provide a direct means of contact for elected representatives and council members telephoning to enquire about specific issues in their constituencies.

In addition, the following dedicated campaign lines are in operation for certain sections of the community to aid NIW's response:

- Developers Line: 0345 877 0002
- Emergency Services: 0345 877 0008
- Telecare Quick Check: 0345 877 0080
- Closed Communities: 0345 877 0007
- Aged Debt: 0345 877 0003

Telephone Contact

The indicator is intended to monitor incoming telephone traffic, which can be regarded as originating from NIW's customer base. All calls received to telephone lines other than principle advertised customer contact points are excluded for reporting purposes (i.e. all other business lines).

Company Agent

NIW has contracted out the provision of Customer Billing and Contacts (CBC) to a 3rd party provider known as Echo Managed Services (Echo). Echo is the provider of CBC services and is based in Capital House, Belfast.

A company agent is defined as an employee of Echo (operating from a principle customer contact point), who operate the contact on behalf of NIW. All calls are answered directly by Customer Service Advisors who are direct employees of Echo.

Office Hours

The indicator covers office hours only. Office hours are defined as the hours which NIW's PACC points are open. These are detailed below:

- **Billing Enquiries:** Monday to Friday - 08.00 to 20.00
  Saturday - 08.00 to 18.00
  Sunday - 12.00 to 18.00
- **Debtline & Aged Debt:** Monday to Friday - 08.00 to 17.00

- **Waterline:** 24 hours a day, 7 days a week, 365 days a year
- **Leakline:** 24 hours a day, 7 days a week, 365 days a year
- **MLA and dedicated lines:** 24 hours a day, 7 days a week, 365 days a year

Telephone Complaints

Calls received about the following water service issues are expected by NIAUR to be included as a complaint:

- no water;
- lack of pressure;
- leaks;
- taste and odour;
- discolouration; and
- hard water (except for simple enquiries, e.g., dishwasher settings).

In addition, calls received about the following wastewater service issues are also expected to be included as a complaint:

- sewer flooding other than those received through NI Direct/ blockages; collapsed sewers / manholes;
- smells from sewage treatment works / pumping stations; and flies from sewage treatment works.

NIW have created a series of CMS logging codes, within the RapidXtra system, to cover these issues. All telephone contacts logged by the agent using one of these codes will be included in the reported volume of telephone complaints. In addition, where a customer expresses dissatisfaction during their call, the agent has the ability to select the complaint flag that will identify the log for inclusion in the reported figures.

NIW excludes from the reported figures, those telephone complaints that are:

- Anonymous;
- About the activities of other utilities;
- Received through NI Direct Incident Line; and
- Received on telephone lines other than principle advertised customer contact points (i.e. all other business lines).

Complaints to/about contractors

Telephone complaints to contractors or other agents about work being undertaken on behalf of NIW are reported only where NIW are informed. Complaints about contractors or other agents are also reported, even if the complaint is referred to the contractor to resolve.

Telephony Structure:

Telephone Providers Network

The supplier during the reporting year was Cable & Wireless, however all physical lines in Capital House were switched from C&W to BT on 6th March 2014, with remaining non-geographic services moved to BT on Tuesday 10th of March 2015. No issues were experienced during these switches.

Cable and Wireless Network IVR

NIW introduced a High Volume Call Answering (HVCA) solution to assist answering large volumes of unexpected trouble calls in December 2012. In order to facilitate the solution, the Cable and Wireless Network IVR was activated on the 'Waterline'. Customers calling this line will hear the following message and be presented with further options:

High Volume Call Answering (HVCA) System

The HVCA system is aimed at ensuring NIW can handle large volume of calls during periods where calls can increase very quickly e.g. Major Incidents, heavy rainfall incidents, etc. This ensures that all calls are logged and customers given specific information resulting in higher levels of customer satisfaction during service interruptions. The HVCA system will recognise customers using the telephone number we hold on their customer record or it can use Voice Recognition to allow customers to speak their Post Code.

Calls will be delivered to HVCA direct from the C&W IVR menu structure when a caller selects option '2'. Calls delivered to this campaign will be offered to agents first in Call Media, however if an agent is not available the call will automatically divert to the HVCA Platform. The divert is controlled by the Cable and Wireless intelligent network, calls will divert on busy tone, route failure and no reply.

As each caller hangs up in the HVCA application, a Call Data Record (CDR) is created which details the caller's activity during the call. A portion of the CDR is passed to NIW in the customer contact file for the creation of work requests through Rapid to Ellipse.

Call Media

Calls received on all other PACC lines and the majority of calls received on Waterline are delivered to the Call Media system for allocation to an appropriately skilled agent. If there is more than one Customer Service Agent available, the system allocates the call to the one who has been available the longest period of time.

If no skilled agent is available immediately then the call will be queued until a skilled agent becomes available. The Call Media Telephony System provides an internal queuing system where callers will hear a ring tone and then a comfort message and music on hold.

The use of Call Media's skill based routing ensures that incoming calls are distributed in a way that will ensure a quality response to the customer.

Call Recording

All calls received in the call centre via Call Media are recorded via NICE call recording software. This software records the time of the call and the telephone number that called the centre if available.

Reporting:

Reporting the DG9 Position (telephony schematic attached in Appendix 1)
DG9 performance is reported by the NIW MI Data Team on a monthly basis using the MI reports from both HVCA and Call Media systems.

Reporting of Telephone Complaints

NIW MI Data Team use Corvu to report on the volume of telephone complaints received, on a monthly basis, using the agreed Operational Original CMS transaction codes and any

other call logged where a complaint flag has been selected by an agent if the customer has expressed dissatisfaction.

Call Listening

NIW MI Data Team listen to 10 randomly selected calls per month, check that they have been logged on Rapid correctly and feedback any quality issues highlighted to ECHO through the monthly response to the MBRP.

Call Handling:

Practices and Procedures

All calls received are managed by either HVCA call routing system or Call Media and routed directly to an appropriately skilled agent based on the first available call handler.

Wherever possible, an agent will deal and action a customer's enquiry at point of contact. Where this is not possible, a message will be raised on the system for further investigation or where appropriate the customer will be transferred.

All enquires are logged on RapidXtra automatically by HVCA or manually via an agent, covering the reason for the contact (contact type) and the advice given or action taken. This is the case whether or not further work is required ensuring all calls are recorded, even if they remain open for further action.

Calls that require further action are logged on RapidXtra and work flowed to teams or individuals as required or passed to Ellipse for issue to mobile work management operational teams. This includes instances where further actions or NIW investigation is required in order to provide a full response to the customer.

Transfers between PACC Points

Agents are multi-skilled, so transfers are not generally made. Transferred calls are reported as one call.

Direct Measurement/Interpolation/Extrapolation

NIW measures statistics for all telephone calls received on PACC points that are delivered directly to the Call Media telephony system and to the HVCA system. Sampling, interpolation or extrapolation is not used in compiling totals.

Messaging:

Use and activation of IVRs (Interactive Voice Response)

During business as usual, an introductory message is set up and assigned to each queue, e.g. Billing Enquires Line. The message greets the customer and thanks them for calling the relevant number. It explains that an agent with be with them shortly and to note that calls are recorded to help provide quality assurance and training.

If a customer telephones out of hours, the customer will receive an out of hour's message. In the event of disaster recovery and building evacuation, a recorded message is activated which explains to customers that calls cannot be answered at the moment, please call back later.

As noted above, the Cable and Wireless Network IVR tool is now being utilised on Waterline to direct customers calling in relation to New Connections, Trouble Calls, Septic

Tank requests and other operational issues. This allows NIW to transfer Trouble Calls to the HVCA system in situations where calls exceed the volume of agents available in the CRC.

Use and activation of message manager systems

No message manager systems were used during the reporting year.

Use and activation of answering machines

Answering machines were not used during the reporting year.

Company Systems:

Telephony

Systems comprise of a suite of Avaya products and a Call Media Automatic Call Distribution (ACD). The Avaya switch is tightly integrated with the Call Media platform that provides Computer Telephony Integration (CTI), ACD and outbound dialler functionality through three main components:

- Avaya S8710 providing core telephony switching
- Call Media Contact Centre software providing ACD, CTI and dialler functionality
- NICE Call Recording; and
- High Volume Call Answering (HVCA), hosted service provided by Twenty First Century Communications.

Calls that arrive at the Avaya switch are routed by the Call Media ACD to appropriately skilled agents via desktop phones.

Location

All systems are located at Capital House, Belfast. There is currently a 240 line capacity dedicated inbound calls from NIW customers, 30 dedicated lines for outbound calls and 30 dedicated lines ring-fenced for priority lines e.g. ER Hotline, Emergency Services, etc.). The scale of the current capacity was implemented in preparation for domestic billing which was deferred in April 2007.

Software

Software comprises of Call Media Enterprise Console, the integral reporting suite supplied with Call Media ACD and NICE call recoding.

Other Issues:

Text Relay Service and Text Phone

NIW has provided for a Text Relay and Textphone service to support customers with hearing difficulties.

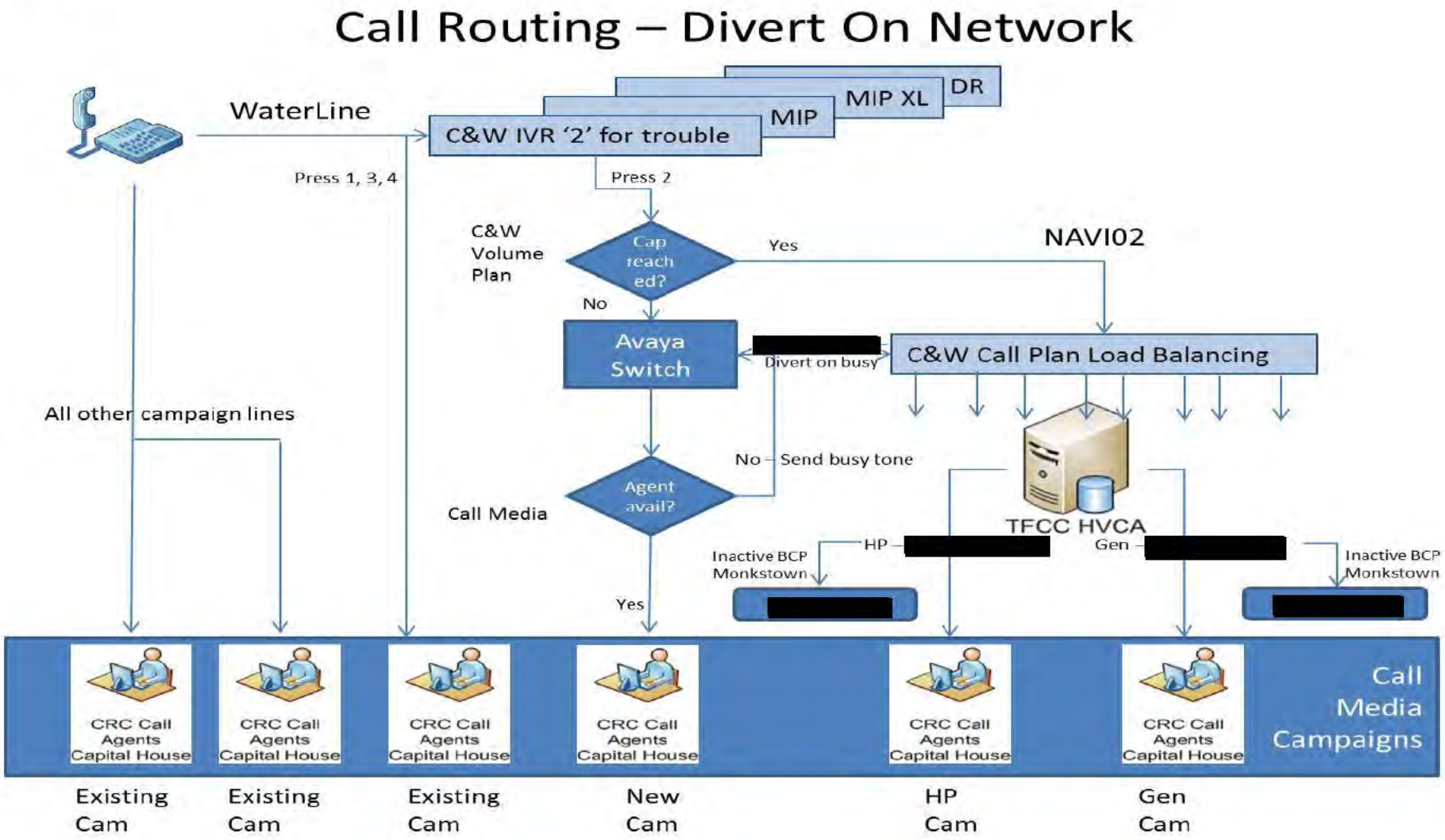
Text Relay Service is a third-party service whereby the customer rings a Text Relay operator, who in turn contacts the Customer Relations Centre via the normal customer line (Waterline/Leakline/Billing, etc.) on behalf of the customer. This is recorded as a call received on the appropriate line.

Rejected Calls

During the reported year, calls currently rejected for any of the following reasons are not included in total calls received:

- The time being out of working hours
- The queue is too full and cannot accept any more tasks. Each queue holds 500 calls at any one time.
- The task queued for the ‘Max Queue Time’ and was returned to the connector.

Appendix 1


Call Routing – Divert On Network
WaterLine
C&W IVR '2' for trouble
MIP
MIP XL
DR
Press 1, 3, 4
Press 2
C&W Volume Plan
Cap reach ed?
Yes
NAVI02
No
Avaya Switch
Divert on busy
C&W Call Plan Load Balancing
All other campaign lines
No
Send busy tone
Agent avail?
Call Media
TFCC HVCA
HP
Gen
Inactive BCP Monkstown
Inactive BCP Monkstown
Yes
CRC Call Agents Capital House
CRC Call Agents Capital House
CRC Call Agents Capital House
CRC Call Agents Capital House
CRC Call Agents Capital House
CRC Call Agents Capital House
Call Media Campaigns
Existing Cam
Existing Cam
Existing Cam
New Cam
HP Cam
Gen Cam

Annual Information Return 2017

Section 4

Customer Research Appendix

Annual Information Return 2017

Customer Research Appendix

Customer Satisfaction

One of the fundamental measures concerning the level of service received by customers is customer satisfaction. NI Water measures customer satisfaction through three different surveys.

- OPA, where Question 18 is used
- SIM, where Question 60 is used
- Omnibus, where we are able to measure satisfaction for a silent majority (those customers who have not contacted NI Water)

For regulatory reporting purposes in 2016/17 only the satisfaction score from OPA, Question 18 is used.

This measure concerns the service received when telephoning NI Water. A customer satisfaction survey (Quality of Call Handling) is used to establish performance against this measure.

Customers' satisfaction with regards to call handling is assessed by Allto, an independent market research company. Allto carry out quarterly surveys (Waves) of customers who have called the Company for any reason. The score for the answer to survey question 18 ("*Overall, how satisfied were you with how your call was handled 1-5?*") is the call handling satisfaction score.

The primary objective is to provide a measurement of customer satisfaction in telephone call handling, by water industry companies.

The resultant data is required to be statistically robust based on the sample received to allow comparison both between companies each year, and for each company on a year on year basis.

Methodology

For each water company taking part, a target was set of 100 telephone interviews with customers who had contacted the water company in the previous week, for each Wave of the survey, equating to 400 per Water Company per year.

Overall Northern Ireland Water (NIW) achieved 400 interviews in total – Q1 was 100 interviews, Q2 100 interviews, Q3 100 interviews and Q4 100 interviews.

All surveys were administered using a Computer Aided Telephone Interviewing (CATI) unit. Each survey was undertaken by multiple interviewers to prevent any possibility of interviewer bias.

Sampling

Sample Provision

NIW is required to record all incoming calls to the contact centre for the seven days in question, irrespective of how calls were handled.

Allto will issue an email on the Monday after the designated 'un-notified' week requesting the previous week's data. The data set should include 'Resolved and Unresolved' contacts only (from telephone and written channels) in relation to both billing and operational areas.

This data is then supplied to Allto and is password protected for data protection purposes. Data is provided based on an Excel spreadsheet containing the following fields:

- Telephone Number;
- Date of contact (date call made to NIW);

In addition to the sample, an Audit sheet was completed which detailed the total number of calls received; number of records excluded from the sample and any factors the company felt may have affected their performance during the sampling period.

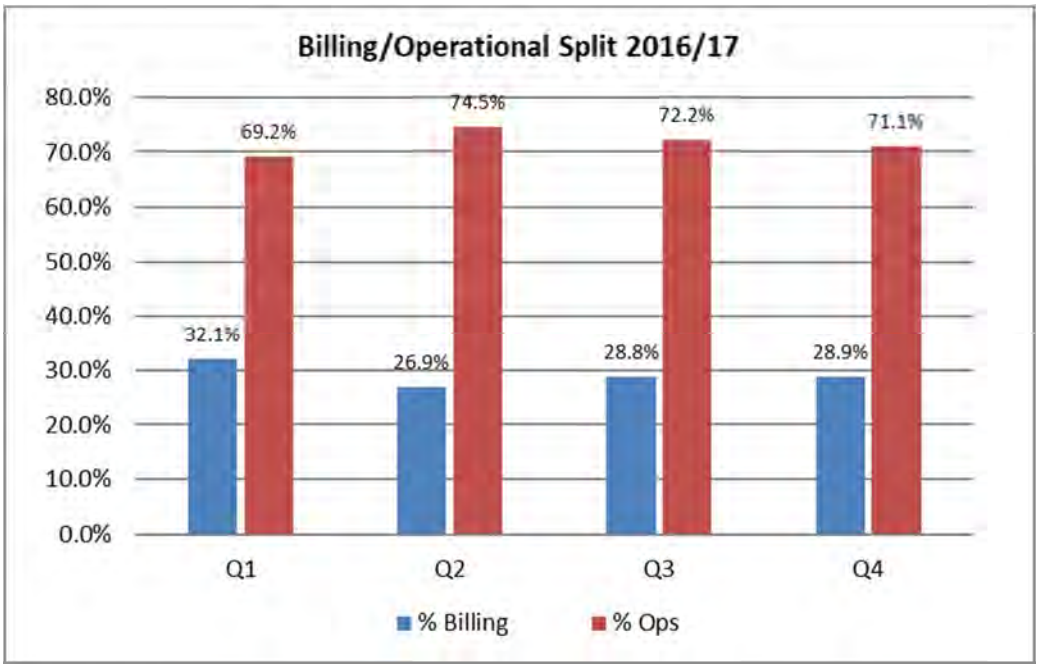
Sample Management

Upon receipt of the sample, Allto applied the following sample management procedures for each water company:-

- **Removal of non-useable records –** e.g. overseas telephone numbers, records with no telephone numbers, visually incorrect telephone numbers; and
- **De–duplication –** removal of any customer record that appears in the supplied sample more than once and of customers that have been included in any previous waves that year to ensure no customer is approached to participate in the survey more than once per annum.

Given that NIW is not billing domestic customers (unlike other UK water companies), it is important to establish the proportion of calls received by day and query type to ascertain the quotas needed to ensure a representational spread of interviews was achieved.

The following table shows the NIW percentage split for billing and operations, per quarter.



Overall Performance Assessment

NIW achieved an overall score of 4.70/5.0 for the reporting year 16/17 against a target of 4.65 which was set prior to PC15 (covering the period April 2015 – March 2021).

The satisfaction score of 4.70 is the average of the three quarters as shown in the bar chart above.

From 2010 NIW were not ranked against the English and Welsh water companies as they moved away from OPA to the SIM and CES methods.

From the graph below it shows the annual score increasing in the first 3 years from 2007 to 2010. The satisfaction score increased from 4.23 to 4.6. The next 3 years of reporting showed a slight decrease. From 13/14 to 14/15, the satisfaction score increased to 4.65. Last reporting year 15-16 shows a slight decrease with a score of 4.59. However, in 15/16 the methodology changed from notified to un-notified, therefore, there was no warning of the survey or affected customer contacts. For 16/17 only three waves of the survey where carried out as it was agreed with the Regulator that NIW no longer were required to use the OPA Customer Satisfaction Survey.

Development

Customer Services has been working extensively on providing an improved customer experience. Under the auspices of the Customer Engagement Oversight Group (CEOG), Customer Services has been actively engaging with NIAUR, CCNI and DRD to develop a range of new quantitative and qualitative customer measures which are most relevant to us and our customers, including the merits (or otherwise) of the current (OPA/DG) regulatory measures.

These new measures include the development of targets and methodologies for:

- Customer Contacts,
- Resolving customer queries at first point of contact (FPOCR),
- Reducing repeat contacts, by analysing and understanding the reasons for these contacts, and
- Developing a solution to obtain more meaningful and timely customer satisfaction feedback to highlight, as close to real time as possible, those areas and activities that cause dissatisfaction for customers.

Planned next steps for delivery

The measures above were trialled and reported on for the first time in AIR16.

Following discussions with the other Stakeholders in CEOG – NIAUR, CCNI and DfI – it was agreed that the measures could be amended from 4 to 3:

- total contacts (which may move to unwanted contacts)
- first point of contact resolution (FPOCR)
- customer advocacy measure (CAM)

Although we have been measuring the original quantitative and qualitative customer measures for two years, CEOG thought there was insufficient data available to set appropriate targets for performance management at the PC15 mid-term review for the second period of PC15. Ideally, three to four years of data would provide sufficient data to set realistic targets. Having demonstrated our customer commitment, CEOG agreed that NI Water could further develop the customer measures and recognised that these adjustments may also need to be considered at the mid-term review.

As such, it was agreed that these new (or revised) measures would continue to be monitored during the remainder of PC15 in the anticipation that performance targets for the new measures will now be proposed for inclusion in the PC21 business plan and draft/final determinations.

Customer Advocacy Measure (CAM)

The Customer Advocacy measure will help NI Water to identify the level of overall satisfaction experienced by our customers from initial contact to resolution of their contact.

The customer advocacy measure is an annual satisfaction score measured through the completion of the SIM ‘Consumer Experience Survey’ and assessment carried out by Allto (McCallum Layton), an independent market research company. Allto carry out quarterly surveys (Waves) of customers who have contacted the company for any reason. The score for the answer to survey question 71 (“*Likelihood of recommending Northern Ireland Water 1-10?”)* is the customer advocacy score.

The Consumer Experience Survey (SIM) is based on a sample of 800 consumers that have had direct contact with the company to request a service or make a complaint. The sample will be split into a minimum of 200 consumers per Quarter and carried out four times a year.

Allto will issue an email on the Monday after the designated 'un-notified' week requesting the previous week's data. The data set should include 'Resolved and Unresolved' contacts only (from telephone and written channels) in relation to both billing and operational areas.

This data is then supplied to Allto and is password protected for data protection purposes. Data is provided based on an Excel spreadsheet containing the following fields:

- Telephone Number;
- Date of contact (date call made to NIW);

The score is calculated using Net Promoter Score methodology based on results from the following statement; if people could choose their water company how likely would you be to recommend your water company to a friend or colleague where 1 is ‘not at all likely to recommend‘ and 10 is ‘extremely likely to recommend’. NIW achieved an overall score of 27 for the reporting year 16/17.