

Annual Information Return 2014

Public Domain Version





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Section 1

Board's Overview

Board's Statement

In support of Northern Ireland Water's 2014 Annual Information Return (AIR14), its Board of Directors is required by the Utility Regulator to prepare a statement on the compilation of AIR14, explaining that it has satisfied itself as to the accuracy and completeness of the information provided.

The Directors consider that AIR14 provides a true and fair view of the state of affairs of NI Water for the financial year 2013/14. In preparing AIR14, the Directors confirm, subject to any departure and explanation described in the commentary, that:

- 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 Principles) have been followed, subject to any material departures disclosed and explained in the financial statements.

The Directors are responsible for keeping proper accounting records that 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 (Northern Ireland) Order 1986.

The Board's Statement sets out how NI Water's Board has satisfied itself that the information provided in AIR14 is as reliable, accurate and complete as is reasonably practicable.

Processes and Internal Systems of Control

AIR14 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 processes were followed in compiling 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.

AIR14 Project Governance

The AIR14 project was coordinated by the Regulation Manager and representatives (senior managers) from relevant functional areas, i.e. those functions which contribute data to the AIR14 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 "Reporting Requirements" were understood and followed;
- ensuring that relevant 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 roles and responsibilities matrix and that all assurance statements were completed.

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 deliverables 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 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 input data in the AIR14 submission. To ensure reporting consistency for AIR14, every item of data provided in the AIR14 tables had a designated author, reviewer and approver. In all cases, the approver was an appropriate senior manager.

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 AIR14 Reporting Requirements on 31st March 2014, with guidance for chapters 16, 30, 40a and 46 provided on 7th April 2014. Audits were undertaken by the company's Auditor and the Reporter in May and June 2014. Feedback from the Reporter and Auditor was used to redraft the tables and commentaries when appropriate.

The complete AIR14 submission was endorsed by the Executive Committee and Board in June 2014.

Board Involvement

In summary, the involvement of NI Water's Board in the completion of AIR14 included:

- Reviewing monthly company business performance analyses;
- Receiving presentations from the Reporter and Auditor in June 2014;
- 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 AIR14.

The following measures help to ensure that AIR14 complies with the Utility Regulator's Reporting Requirements and provides some assurance in respect of material assumptions and judgements included in the AIR14 commentaries:

- Clear accountability at senior management level for the ownership of all elements of 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 owner, 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 submitted for 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.
- Both the Reporter and the Auditor present to the Audit Committee and/or Board near the conclusion of the AIR audit process.
- Directors may challenge the production and content of 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

In light of the above, 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 AIR14.

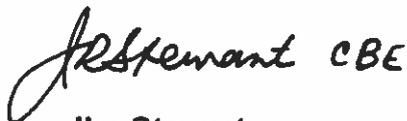
Each Director is satisfied that:

- 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



Jim Stewart
Non-Executive Director, 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	REPORTING YEAR 2010-11	REPORTING YEAR 2011-12	REPORTING YEAR 2012-13	REPORTING YEAR 2013-14
A Consumer Service						
1 DG2 Properties at risk of low pressure removed from the risk register by company action	nr	0	283	262	297	132
2 DG3 Supply interruptions > 12hrs (unplanned and unwarned)	%	2	26.57	0.09	0.32	0.14
3 DG3 Supply interruptions (overall performance score)	nr	2	95.79	0.97	1.98	0.97
4 DG6 % billing contacts dealt with within 5 working days	%	2	98.90	99.97	100.09	99.92
5 DG7 % written complaints dealt with within 10 working days	%	2	100.00	99.27	99.78	99.72
6 DG8 % metered customers received bill based on a meter reading	%	2	96.10	97.88	98.73	99.11
7 Call Handling Satisfaction score (1-5)	nr	2	4.59	4.57	4.54	4.63
8 DG9 % calls not abandoned	%	2	88.20	99.15	98.45	98.40
9 DG9 % calls not receiving the engaged tone	%	2	32.80	100.00	100.00	100.00
10 Overall Performance Assessment (OPA) score (11 Measures)	nr	0	131	184	198	216
11 Total Leakage	MI/d	0	177	168	162	167
12 Security of supply index	nr	0	97	100	100	100
13 Percentage of NI Water's power usage derived from renewable sources	%	1	12.6	14.4	13.4	33.1
B Quality Water						
14 % mean zonal compliance with drinking water regulations	%	2	99.81	99.83	99.80	99.85
15 Operational Performance Index (Turbidity, Iron & Manganese)	nr	2	99.08	99.31	98.96	99.30
16 % Service Reservoirs with coliforms in >5% samples	nr	2	0.00	0.00	0.00	0.00
C Water Outputs						
17 Water mains activity - Length of new, renewed or relined mains	km	0	204	510	326	226
18 Completion of nominated trunk main schemes	nr	0	2	0	2	0
19 Completion of nominated water treatment works schemes	nr	0	2	0	0	0
20 Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks	nr	0	5	3	1	0
21 Completion of nominated Major Incident Mitigation schemes	nr	0				3
D Serviceability						
22 Water infrastructure serviceability	Text		N/C	Stable	Stable	Stable
23 Water non-infrastructure serviceability	Text		N/C	Stable	Stable	Stable

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	REPORTING YEAR 2010-11	REPORTING YEAR 2011-12	REPORTING YEAR 2012-13	REPORTING YEAR 2013-14
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	4	14	14	11
B Quality Sewerage								
2	% of WwTWs discharges compliant with numeric consents		%	1	88.6	93.3	93.3	92.0
3	% of total p.e. served by WwTWs compliant with numeric consents		%	1	95.5	96.5	98.8	98.0
4	Number of high and medium pollution incidents attributable to NI Water		nr	0	46	44	18	26
C Sewerage Outputs								
5	Sewerage activity - Length of sewers replaced or renovated		km	0	26.74	12.78	24.05	25
6	Delivery of improvements to nominated UIDs as part of a defined programme of work		nr	0	20	43	38	11
7	Delivery of improvements to nominated WwTWs as part of a defined programme of work		nr	0	29	15	12	17
8	Small wastewater treatment works delivered as part of the rural wastewater investment programme		nr	0	11	23	14	7
D Serviceability								
9	Sewerage infrastructure serviceability		Text		N/C	Stable	Stable	Stable
10	Sewerage non-infrastructure serviceability		Text		N/C	Stable	Stable	Stable

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL RETURN - BOARD'S OVERVIEW

TABLE C - EXPENDITURE & FINANCIAL PERFORMANCE MEASURES (TOTAL)

DESCRIPTION		UNITS	DP	REPORTING YEAR 2010-11	REPORTING YEAR 2011-12	REPORTING YEAR 2012-13	REPORTING YEAR 2013-14
A TOTAL EXPENDITURE							
1	Total operating expenditure - water service (NI Water only)	£m	3	87.148	76.089	71.882	70.914
1a	Total operating expenditure (PPP) - water service	£m	3	1.795	2.051	1.845	8.234
2	Total capital expenditure (excl. adopted and nil cost assets)	£m	3	73.876	84.067	69.303	71.809
3	Total operating expenditure - sewerage service (NI Water only)	£m	3	71.569	69.725	72.113	73.300
3a	Total operating expenditure (PPP) - sewerage service	£m	3	23.371	23.457	26.488	24.896
4	Total capital expenditure (excluding adopted and nil cost assets) - sewerage service	£m	3	88.267	107.944	92.709	95.548
B CURRENT COST ACCOUNTS - PROFIT & LOSS							
5	Total Turnover	£m	3	345.740	354.819	366.398	361.313
6	Current cost operating costs (including CCD & IRC)	£m	3	-341.824	-355.174	-349.47	-343.723
7	Current cost operating profit	£m	3	8.893	2.184	19.872	19.799
C CAPITAL BASE & POST TAX RETURN							
8	Capital Value Year - End (outturn)	£m	3	1,582.344	1724.786	1812.8	1948.800
9	Total net debt	£m	3	725.832	809.900	868.158	909.323
10a	Post tax return on capital	%	2	0.58	0.13	1.12	1.05%
10b	Pre tax return on capital	%	2	0.58	0.13	1.12	1.05%
D KEY FINANCIAL INDICATORS							
11	Cash interest cover (funds from operations; gross interest)	ratio	2	3.07	3.55	3.34	3.60
12	Adjusted cash interest cover (funds from operation less capital charges; gross interest)	ratio	2	-0.28	0.16	-0.03	0.27
13	Adjusted cash interest cover (funds from operation less capital maintenance; gross interest)	ratio	2	1.77	1.52	1.70	1.67
14	Funds from operations: debt	ratio	2	0.13	0.16	0.15	0.13
15	Retained cash flow: debt	ratio	2	0.10	0.13	0.12	0.12
16	Gearing: D/RCV	%	2	45.87	46.96	47.89	46.66%
17	Gearing: D/RCV (adjusted for PPP liability)	%	2				49.12%

Chapter 1

Monitoring Plan Outputs

Tables A and B

1.1 Monitoring plan outputs

Chapter 1 of the Board's Overview is intended to provide an overview of the delivery of services and outputs against the PC13 Monitoring Plan. Table 1.1 below provides a tabular summary of performance in 2013/14 compared to PC13 targets.

As can be seen, NI Water has achieved or outperformed in all but five target areas. The reasons for these variances and the actions we are undertaking to recover underperformance are set out below.

1. Call handling satisfaction score:

Although the call handling satisfaction score for 2013/14 missed the target of 4.70, we were able to report our highest ever annual customer satisfaction performance (4.63) and significant increase in customer satisfaction from the previous year's score of 4.54.

Failure to hit the target cannot be attributed to any specific cause, issue or failure. It has been concluded that the PC13 target was simply set too high. However, it is worth noting that NI Water's score of 4.63 is equal to the industry average for this customer satisfaction measure when it was last measured in England and Wales (2009/10).

NI Water is committed to improving the service we offer our customers and we continue to make enhancements to our service delivery. Improvement will be supported through our 'Customer Experience' projects, which encompass 'Customer Forum' and 'Customer Journeys', as well as looking at the further use of technology-based solutions to engage with and inform customers.

During 2014/15, we are renewing the contract for services from the Customer Relations Centre and recognise that there may be a slightly reduced performance during the year as the processes and systems are implemented and tested. We have drawn on our experience with the customer satisfaction scoring methodology when setting the PC15 customer satisfaction targets – these build from 4.65 in the first two years to 4.75 in the final two years.

2. Percentage of calls not abandoned (DG9):

The PC13 target for abandoned calls (99.00%) was set before NI Water introduced the High Volume Call Answering system. HVCA was introduced following the freeze/thaw incident of 2010/11 in order to provide customers with an improved level of service – providing tailored updates on known problems in their specific geographical location.

Whilst providing up to date information to customers, automated systems such as HVCA are known to result in higher levels of abandoned calls.

Although NI Water will endeavour to make the HVCA interface as 'user friendly' as possible, the fact that PC13 targets did not take into account the use of an

automated telephone system means that the PC13 target for 2014/15 is not likely to be achieved.

Unlike in England and Wales, the PC13 target does not take account of the higher level of abandoned calls within an HVCA system. If NI Water adopted a similar approach to England and Wales, we would have achieved 99.13% (compared to our target of 99.00%).

3. Removal of properties from sewer flooding register (DG5):

NI Water's estimates of the number of properties which could be removed from the flood risk register (DG5) by company action during PC13 were estimates based on past experience of the number of DG5 properties removed by drainage area schemes.

During 2013/14, the actual number of properties confirmed to be at risk after detailed feasibility studies were complete was considerably less than originally estimated. This means that there are actually less properties at risk of internal flooding than was originally thought. Properties confirmed by feasibility studies to not be at risk of internal flooding have been removed from the risk-register, albeit due to better information rather than on-the-ground company action.

Consequently, whilst the number of properties removed from the at-risk register in 2013/14 was 53 in total, those removed by "company action" (11) was lower than target (23).

4. Delivery of small wastewater treatment works:

A total of 7 nominated small wastewater treatment works achieved beneficial use in 2013/14, compared to a target of 18. However, it is anticipated that the PC13 total of 25 nominated works will be operational by the end of 2014/15.

Table 1.1 – Monitoring plan targets and 2013/14 outturns

Line Description	Units	DP	2013/14	
			Target	Outturn
Water				
DG2 Properties at risk of low pressure removed from the risk register by company action	nr	0	118	132
DG3 Supply interruptions > 12hrs (unplanned and unwarned)	%	2	0.19	0.14
DG3 Supply interruptions (overall performance score)	nr	2	1.12	0.97
DG6 % billing contacts dealt with within 5 working days	%	2	99.90	99.92
DG7 % written complaints dealt with within 10 working days	%	2	99.25	99.72
DG8 % metered customers received bill based on a meter reading	%	2	98.50	99.11
Call Handling Satisfaction score (1-5)	nr	2	4.70	4.63
DG9 % calls not abandoned	%	2	99.00	98.40
DG9 % calls not receiving the engaged tone	%	2	99.90	100.00
Overall Performance Assessment (OPA) score (11 Measures)	nr	0	202	216
Total Leakage	ML/d	0	169	167
Security of supply index	nr	0	97	100
Percentage of NI Water's power usage derived from renewable sources	%	1	18.5	33.1
% mean zonal compliance with drinking water regulations ***	%	2	99.70	99.85
Operational Performance Index (Turbidity, Iron & Manganese) ***	nr	2	99.10	99.30
% Service Reservoirs with coliforms in >5% samples ***	%	2	0.00	0.00
Water mains activity - Length of new, renewed or relined mains	km	0	214	226
Completion of nominated trunk main schemes	nr	0	0	0
Completion of nominated water treatment works schemes	nr	0	0	0
Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks	nr	0	0	0
Completion of nominated Major Incident Mitigation schemes	nr	0	3	3
Water infrastructure serviceability	Text		Stable	Stable
Water non-infrastructure serviceability	Text		Stable	Stable
Wastewater				
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	23	11
% of WwTWs discharges compliant with numeric consents ***	%	1	88.6	92.0
% of total p.e. served by WwTWs compliant with numeric consents ***	%	1	97.2	98.0
Number of high and medium pollution incidents attributable to NI Water ***	nr	0	46	26
Sewerage activity - Length of sewers replaced or renovated	km	0	9	25
Delivery of improvements to nominated UIDs as part of a defined programme of work	nr	0	12	12*
Delivery of improvements to nominated WwTWs as part of a defined programme of work	nr	0	19	19**
Small wastewater treatment works delivered as part of the rural wastewater investment programme	nr	0	18	7
Sewerage infrastructure serviceability	Text		Stable	Stable
Sewerage non-infrastructure serviceability	Text		Stable	Stable

* 12 nominated UIDs includes Winters Lane (delivered in PC10).

** 19 nominated WwTWs includes Forkhill and Mullaghbane (delivered in PC10).

*** Targets measured on a calendar year basis.

1.2 Delivering service to customers

We have improved the levels of service to our customers. Our OPA score has reached its highest ever level of 216 in 2013/14. We achieved our 2013/14 target on 'calls not receiving an engaged tone' - 100% against a target of 99.90%.

However, we failed to achieve our 'calls not abandoned' target due mainly to this being the first full year operating our new high volume call answering (HVCA) system, with a performance of 98.40% against a target of 99%. Unlike in England and Wales, the target does not take account of the higher level of abandoned calls within an HVCA system. If NI Water adopted a similar approach to England and Wales, we would have achieved 99.13%.

By improving the standard of service delivery and the accuracy of customer data we aim to reduce the number of times our customers need to contact us. Substantial efforts have been made to drive down call volumes, and we met our target of no more than 250,000 calls in 2013/14, receiving 226,881 calls.

We have increased the number of individual customers on our Customer Care Register to 2,903 in 2013/14.

We aim to implement enhancements to the online facilities available to our customers, including the ability to: access and update billing account details, make payments, request septic tank emptying and view up-to date operational information via an interactive map. Further service improvements, especially the introduction of a new self-service solution, will continue to reduce call volumes and improve the level of service being provided to customers.

We undertook a full scale mock incident in October 2013. The exercise was planned to practise and validate the Company's major incident management arrangements and in particular its effectiveness in responding to a major wastewater incident. Our major incident response was enacted over December 2013 and January 2014 during the tidal surges.

Accurate measured bills are central to customer account management and we met our performance targets for meter reading and measured billing in 2013/14: 98.5% of bills to be based on actual meter reads – we achieved 99.1%.

The balance between achieving as many reads as possible and issuing within 5 days has been challenging and we will be putting steps in place in 2014/15 to achieve both performance indicators.

We achieved the 5 day target response time for billing contacts at 99.92% against the target of 99.90%.

A new web self-serve portal was made available to customers in 2013/14. The portal includes an account overview, billing and consumption histories, the ability to pay bills and to change account details online.

In 2013/14 we introduced a new bill format which has been easier for all customers to understand. We continue to maintain a reduced level of billing related contact and quicker customer payments.

During 2014/15 we will be working on making major enhancements to our billing system to ensure accurate and timely billing with additional facilities such as group and consolidated billing.

Non-Domestic Customers - we have a number of Customer Liaison Officers who have been visiting our agricultural non-domestic customers to engage them in understanding billing and payments. This has proved very successful. We have also enhanced our account management approach and introduced additional roles to cover other customer groups.

Quarterly independent market research is carried out, through telephone surveys of 400 customers who have called us for any reason.

We will also be working with the Utility Regulator, CCNI and DRD to develop a new Customer Satisfaction solution. We will engage industry expertise and experience to provide actionable data to inform service improvements.

During 2013/14, we introduced the key Customer Satisfaction elements from the Service Incentive Mechanism (SIM), which will double the number of customers currently being surveyed and cover the 'end to end' customer delivery process. 2014/15 will provide us with our first full year of SIM customer surveys.

The customer satisfaction surveys were completed in quarters 2 to 4, achieving an overall average score of 4.63 out of 5. The performance was below the target of 4.70. These surveys are invaluable and we will continue to use them to identify opportunities to improve our customer experience.

We achieved the 10 day target response time for written complaints with a performance of 99.72% against the target of 99.25%.

1.3 Improvements to drinking water and environmental quality

Our customers continue to benefit from record levels of service. Drinking water and wastewater compliance is at some of the highest levels ever in Northern Ireland. Customers have also seen improved response times to calls and complaints and lower levels of leakage.

Drinking water

Our continued investment in the water mains improvement programme is contributing towards a reduction in levels of supply interruptions. In 2013/14, customers experienced a record low level of unplanned supply interruptions lasting more than 6 hours.

We also bettered our leakage reduction target by 1.7 million litres per day, saving water equivalent to the daily consumption of 4,500 domestic properties.

We work hard to provide our customers with high quality drinking water. We carry out over 110,000 tests every year to make sure our water is clean and safe. The 2013¹ compliance levels for drinking water at the customer tap are at some of their highest levels, with a Mean Zonal Compliance (MZC) of 99.85%. The compliance for 2013 demonstrates the continued high quality drinking water provided to the people of Northern Ireland and exceeds the requirement of the DRD's Social and Environmental Guidance of 99.7%.

¹ This target is measured on a calendar year basis.

We use Drinking Water Safety Plan's (DWSP) to proactively highlight investment needs for those water supply systems which are likely to fail any parameters, including taste and odour. We have identified 6 water supply systems for in-depth studies over 2014 to assist us in planning appropriate investment in the future.

The end of 2013 saw a reduction in the regulatory limit for lead in drinking water. We will continue to implement our strategic lead policy and lead pipe replacement programme focused on improving compliance with EU lead standard (10µg/l). We recognise that we need to work together with DRD, DWI and other stakeholders to develop and implement a strategic approach for addressing lead compliance issues associated with private supply pipes and domestic distribution systems. We have produced a Lead Strategy and input into the DRD's Long Term Water Strategy.

Wastewater

We bettered our targets for wastewater treatment compliance in 2013¹, with 92.0% of wastewater treatment works compliant (compared to a target of 88.6%) and 98.0% 'population equivalent' served by compliant works (compared to a target of 97.2%).

The removal of properties at risk of sewer flooding remains a key area of focus. We have internal and external historical flood reporting capability in place from April 2013 to better plan our capital investment. This will help to remove properties from the 'at risk register' and alleviate the problems faced by areas which have experienced flooding events such as Sydenham and Downpatrick.

We outperformed against the sewer flooding (overload) target, but we underperformed against the sewer flooding (other causes) target. Most incidents resulted from blockages due to inappropriate items being put in the sewers. We underperformed against the sewer flooding (at risk) target. More properties were removed by better information and, therefore, fewer were available for removal by direct on-the-ground company action.

Pollution incidents² are at a record low level, with 26 high or medium severity incidents recorded against a target of not more than 46.

Our commitment to the protection of the natural environment is further demonstrated by the continued accreditation of our Environmental Management System under ISO 14001.

1.4 Delivering sustainable services

As one of the largest landowners and users of electricity in Northern Ireland, our activities have a significant impact on the environment. We have implemented Sustainable Catchment Management Planning (SCaMP) for drinking water catchments to provide a more environmentally sustainable way of improving water quality. We are also targeting energy efficiencies and the use of renewable sources of energy to mitigate our impact and reduce the production of climate change gases.

Many challenges lie ahead. The approach to delivering water and wastewater services is changing. Climate change, an increasing focus on the value of water, rising customer expectations and higher discharge standards all require us to adopt a more sustainable approach. We recognise the need for more environmentally and economically sustainable solutions. These include improved land management, reduced leakage and customer

² This target is measured on a calendar year basis.

demand; and local management of storm water. We are also utilising a new wastewater treatment system which uses willows.

We are working to develop a policy within which more sustainable solutions can be delivered. Such an approach will include incremental changes to how we operate and will require input from all our stakeholders. The progress made over 2013/14 has enabled the organisation to move further along our transition path. We look forward to reporting further progress in the second year of PC13, and to working constructively with all our stakeholders as we approach the PC15 period.

The water and wastewater industry is vulnerable to the impacts of climate change - in the form of water scarcity, flooding, and more frequent extreme weather events. When planning for the future, we will consider how these changes might impact on our services and what we need to do to both adapt to changing climatic conditions and mitigate the impact of further changes in weather patterns by reducing our greenhouse gas emissions.

The following are examples of the activities being undertaken:

- Operation of four hydro-electric power generation plants;
- Reducing the energy used in aeration at wastewater treatment works through installation of improved controls and air distribution systems;
- Consideration of carbon emissions in NI Water's 'Capital Investment Appraisal System', which enables environmental impact to be more fully considered in the economic appraisal of capital investment projects;
- Reducing the energy used in pumping through focused refurbishment and replacement of major pumps;
- Piloting the use of wastewater final effluent to be used as a nutrient that will promote the growth of biomass (willows) for renewable energy heating;
- Optimisation of usage of electricity, chemicals and fuels through more accurate measurement and definition of responsibility for usage; and
- Inclusion of the cost of carbon in the calculation used to determine the level of leakage that NI Water should seek to achieve.

NI Water is progressing with a number of sustainable wastewater treatment pilot projects that will allow costs to be reduced whilst enhancing their surrounding natural environment. These will inform expansion of the use of this approach in the PC15 period

In 2013/14 around 33% of NI Water's electricity consumption came from renewable sources. By the end of PC15 this will increase to at least 40%.

We are accredited under the 'Carbon Trust Standard'. To achieve the standard, organisations must:

- measure their carbon footprint;
- meet an absolute reduction in emissions; and
- demonstrate that it is managing carbon in an appropriate manner.

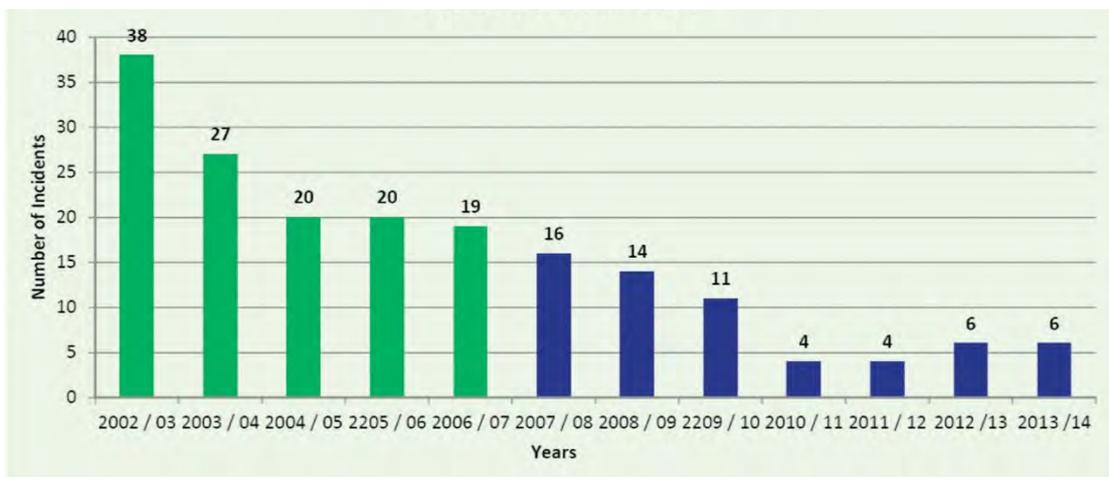
Operational greenhouse gas emissions were 218.56 kg of carbon dioxide equivalent per million litres of treated water in 2013/14.

We plan to install solar panels at a number of our facilities in 2014/15 to increase the electricity from renewable sources.

1.5 Health and Safety

We have a zero accident ambition. We continue to focus on making NI Water a healthy and safe place to work by working with our employees, trade unions and contractors to improve the health of our employees and reduce accidents in the workplace.

The health and safety performance and safety behaviours within NI Water continue to set an example to all other water industry companies. The graph below shows our performance since 2002 which, despite an increase from 2011/12 of four RIDDORS to six in 2013/14, shows a significant drop since 2002/03 (when we had 38 incidents).



NI Water's approach to occupational health and safety was recognised in an awards scheme run by the safety charity, the Royal Society for the Prevention of Accidents (RoSPA).

NI Water received the 2013 RoSPA Gold Award for occupational health and safety, recognising the dedication of its staff and senior management to the safety and health of its employees and to continuous improvement in this regard.

We are always striving for continuous improvement across all aspects of health and safety, with one such initiative being our 'Safe Contract Management' theme which focuses on delivering a safety culture through effective safety behaviours.

Chapter 2

Financial performance measures

Table C

2.1 Financial performance

Summary statement of comprehensive income

	Year to 31 March 2014 (£m)	Year to 31 March 2013 (as restated) (£m)
Revenue	432.7	425.6
Results from operating activities	196.8	196.5
Net finance charges	(58.3)	(61.1)
Profit before income tax	138.5	135.4
Income tax expense	14.9	(25.2)
Profit for the year	153.4	110.2
Other comprehensive income, net of income tax	7.9	(11.5)
Total comprehensive income for the period	161.3	98.7

Revenue was £432.7m for the year to 31 March 2014 (2013: £425.6m). Included in revenue was £297.3m (2013: £302.6m) received from the DRD (Subsidy £277.3m; Road Drainage Charges £20.0m) – the decrease in the customer subsidy was primarily driven by the decrease in notional household tariffs as the cost base of the business reduces.

Non-appointed business activities generated £5.2m of income (2013: £5.2m) resulting in a profit before tax and dividend for non-appointed activities of £1.6m (2013: £1.5m).

The remaining components of revenue are measured and unmeasured charges, transfers of assets from customers, connection / infrastructure charges and other third party contributions.

The weak economic conditions in Northern Ireland have had an impact on the financial performance of NI Water. Consumption levels have decreased during 2013/14, leading to an income reduction from customers with measured and unmeasured water supply.

It is predicted that Northern Ireland's economy will show relatively flat spending growth in 2014/15. This would suggest that demand should remain relatively constant.

We have seen input cost inflation decrease over 2013/14, with Retail Price Inflation (RPI) falling to 2.5% in March 2014 (March 2013: 3.3%).

Taxation

The tax credit for the year was £14.9m (2013: tax charge of £25.2m). The effective tax rate for the year to 31 March 2014 was 18.5% (2013: 18.5%).

We do not currently pay any cash tax given the capital allowances available on our capital investment programme. This tax will become payable in due course.

Distributions

The Board will consider a proposal to declare a dividend of £24m in July 2014 (2013: £29m).

The dividend to the DRD represents a return to the tax payer on the amount initially invested in the company.

The main movements in the financial position items were increases in property, plant and equipment of £162.7m (2013: £143.6m) relating to our Capital Investment Programme offset by increases in net debt.

Total assets increased by 6.1% to £2,568.0m (2013: £2,419.5m).

Our net debt³ figure was £1,127.8m at 31 March 2014 (2013: £1,082.8m).

Gearing (the ratio of net debt to equity and net debt) decreased to 50.2% (2013: 52.8%).

Summary statement of financial position:

	At 31 March 2014 (£m)	At 31 March 2013 (£m)
Total non-current assets	2,532.8	2,364.4
Total current assets	35.2	55.1
Total Assets	2,568.0	2,419.5
Equity	1,120.6	988.4
Total non-current liabilities	1,314.3	1,304.2
Total current liabilities	133.1	126.9
Total liabilities	1,447.4	1,431.1
Total equity and liabilities at 31 March	2,568.0	2,419.5

Liquidity

Operating activities generated a net cash inflow of £213.6m (2013: £203.8m). Net cash outflows of £169.0m (2013: £164.8m) related to investing activities. Net financing activities created a cash outflow of £62.7m (2013: outflow of £21.2m).

Investing activities included the acquisition of property, plant and equipment of £170.3m (2013: £166.1m), proceeds from the sale of property, plant and equipment of £1.2m (2013: £1.2m) and interest received of £0.1m (2013: £0.1m).

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). Working capital represents the funds available for day to day operations. It includes stocks, trade debtors and trade creditors.

Dividends paid to the DRD during the year totalled £29m in respect of the previous financial year.

Pension funding

The pension scheme is broadly in balance with a surplus value of £3.5m at 31 March 2014 (2013: deficit of £5.3m). This was made up of a total market value of assets of £171.0m (2013: £155.8m) less actuarial value of liabilities £167.5m (2013: £161.1m). The movement to a surplus has been driven primarily by actuarial gains in the year arising from an increase in the discount rate assumption and decrease in the inflation rate assumption used to calculate the scheme liabilities.

NI Water's pension scheme is a separate legal entity which is run by a Board of Trustees.

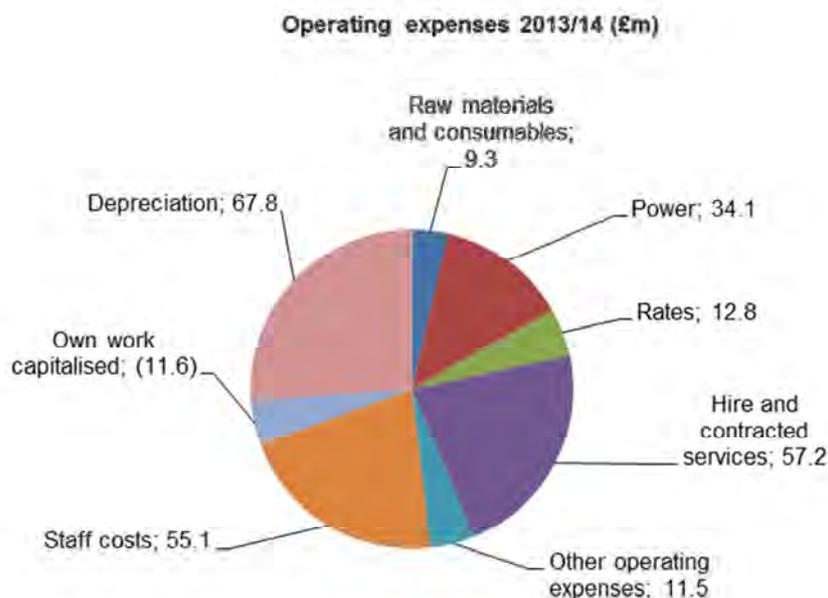
³ Refer to notes 18 and 20 in the Statutory Accounts. Net debt consists of loans of £911.6m (2013: £882.6m) and finance leases of £218.9m (2013: £221.1m) less cash and cash equivalents of £2.7m (2013: £20.9m).

2.2 Costs (capital and operating) against expectations

Operating

Operating expenses in 2013/14 of £236.2m (2013: £229.3m) increased from last year. The increase primarily resulted from higher capital charges on our increasing asset base and higher contractor costs. These increases were offset in part by lower rates costs and lower voluntary early retirement/voluntary severance expenses.

NI Water is one of the largest users of electricity in Northern Ireland. We spent around £34m on power in 2013/14, of which around 50% is used to pump water and wastewater.



The net finance costs are primarily due to interest on our borrowings of £37.5m (2013: £40.3m), PPP liabilities of £20.6m (2013: £21.8m) and net finance costs on the pension fund £0.3m (2013: net income £0.8m) offset by bank interest received of £0.1m (2013: £0.2m).

Capital

We delivered our target of £168m of capital investment during 2013/14 (2013: £162m).

2.2.1. Atypical operating expenditure items

We consider the following items to represent atypical and re-organisational operating expenditure in accordance with Regulatory Accounting Guideline 3.06 (RAG 3).

Atypical and re-organisational operating expenditure items:

	Year to 31 March 2014 (£m)	Year to 31 March 2013 (£m)
Business improvement programme	1.3	1.0
Voluntary Early Retirement / Voluntary Severance schemes	1.2	3.4
Total	2.5	4.4

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 2014 is £115.59m and £96.86m respectively (2013: £115.09m, £99.84m). The amount included in PPP Creditors at 31 March 2014 is £96.06m (2013: £97.53m).

Project Omega

A contract with Glen Water Limited was signed on 6 March 2007 for the provision of sewage treatment and sludge disposal at seven 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.

2013/14 PPP cash payments

On Balance Sheet	£k
Alpha	
Opex	8,234
Interest	6,933
Total P&L Impact	15,167
Capital Repayment	1,473
Life Cycle Maintenance	1,516
Total Balance Sheet Impact	2,989
Total PPP Payments	18,156

Effective Interest Rate used to calculate Alpha finance charge	3.57%
----------------------------------------------------------------	--------------

Off Balance Sheet	Omega (£k)	Kinnegar (£k)
Opex	22,705	2,191
Residual Interest	3,129	256
Total PPP Payments	25,834	2,447

Estimated Residual Value at End of Contract

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

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

2.4 Regulatory Capital Value (RCV)

	At 31 March 2014 (£m)	At 31 March 2013 (£m)
Prior year closing RCV	1,812.8	1,725.4
Indexation and other adjustments	52.3	53.3
Opening RCV	1,865.1	1,778.7
Capital expenditure	137.3	159.8
Infrastructure renewals expenditure	34.1	29.7
Infrastructure renewals charge	(34.1)	(29.7)
Grants and contributions	(5.8)	(4.1)
Depreciation (including capital grants)	(46.7)	(51.6)
Disposal of assets	(1.1)	(4.4)
Closing RCV (pre regulatory adjustments)	1,948.8	1,878.4
Regulatory adjustments	-	(65.6)
Closing RCV	1,948.8	1,812.8
Average RCV	1,880.8	1,769.1

Chapter 3 Efficiencies

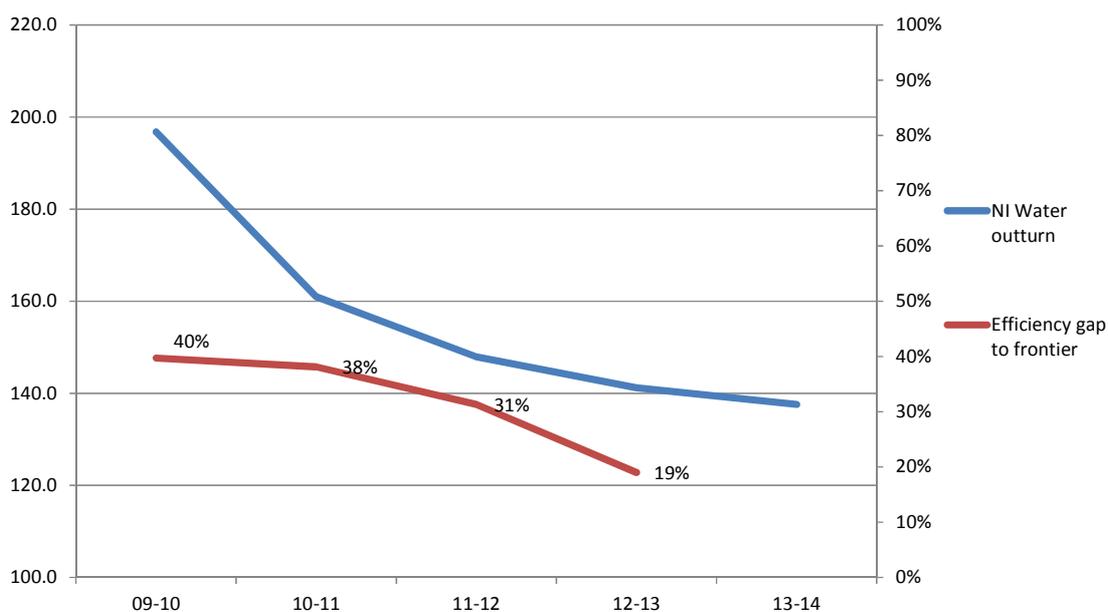
3.1 Capital and operating expenditure efficiencies

Our focus on controlling operating expenditure and working more efficiently contributed towards a reduction in running costs of around £7m⁴ in 2013/14. This has helped us reduce average customer bills by 4%. The improving performance is supported by our investment programme of around £160m each year. We have halved the efficiency gap with the leading companies in England and Wales from 49% in 2007/08 to 19%⁵ in 2012/13.

Operational cost efficiencies have been generated through a range of measures which include in-sourcing and making better use of in-house skills; reducing supply chain costs through procurement efficiencies; reducing operational contractor costs and continuing our Voluntary Early Retirement and Voluntary Severance schemes.

Operating expenditure (PC10 and PC13)

[excluding Public Private Partnership and atypicals (one-off) expenditure]
(2012-13 prices)



3.2 Business improvement

We are committed to investment in innovation through new systems and technology that provide benefits in terms of improving service performance or reducing operational costs, whilst improving the resilience and security of essential control and monitoring networks.

We have developed and implemented a new Research, Development and Innovation (RDI) Strategy. This sets out how technical needs and opportunities are identified, before research and development, or innovation projects, are then initiated.

⁴ Based on an approach used by the Utility Regulator. Details of this approach are contained within the Utility Regulator's Cost and Performance Report.

⁵ Subject to determination by the Utility Regulator.

Over 2013/14, our research, development and innovation programme projects have included:

- Developing Instrumentation, Control and Automation signature designs;
- Pilot projects to evaluate sludge dewatering and thickening processes;
- Developing a Network Distribution Control System to permit remote controls at key service reservoirs, allowing the demand from the upstream water treatment works to be smoothed. This improves drinking water quality and reduces costs;
- Participating in an EU INTERREG IVA Project "ANSWER" using willows to develop low carbon and environmentally sustainable solutions for dealing with organic waste.

Together with other UK water and sewerage companies, we employ research bodies such as the United Kingdom Water Industry Research Limited (UKWIR) and the Water Research Centre (WRC) to provide a collaborative programme of research tailored to suit the needs of the UK water industry.

We also collaborate with and support UK university research projects and are a member of Queen's University Environmental Science and Technology Research Centre (QUESTOR), an international environmental research organisation based at Queen's University Belfast.

During the year we undertook design, development and implementation of an automated electronic file transfer interface for Flooding Line incident (FIL) contacts between BT and our customer contact systems.

During the year, we carried out a project to review NI Water's sludge and odour strategy focusing on reducing operational costs.

3.3 Risk of failure to deliver

NI Water has reduced its number of staff from approximately 2,000 at the beginning of 2005/06 to approximately 1,280 in 2013/14, while at the same time delivering operational efficiency targets. The operational cost efficiency targets for the PC13 period are extremely challenging. Our ability to maintain essential services remains at risk. The capacity of the organisation to quickly become more efficient and effective, during a sustained period of restructuring and people efficiency, may be exceeded, increasing the risk of operational and service failure.

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 2014

Section 2

Tables and Commentary

Promoting the Efficient Use of Water

Range of activities undertaken by the company over household and non-household

NI Water has during this year continued its efforts to promote water efficiency to its customers. These efforts have included using the methods 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 personnel serving schools, community and specialist groups, stakeholders and partners. Sixty percent of their 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, dishwashers and care as to the machine selected (water saving).
 - d. use of showers rather than baths and shower timers to reduce time spent in the shower.
 - e. shower heads and water tap aerators are recommended.
2. efficient use of water in the garden.

WET have attended a variety of external public events, these have reduced from previous years due to budget constraints.

- Young at Heart Retirement Living Exhibition(April).
- Balmoral Agricultural Show (May).
- European Heritage Open Day (September).
- Queens University Environmental Fair (November).
- Winter Planning for Older People-Be Safe, Be Well, Greysteele(November).
- Belfast City Council Winter Readiness Clinic-Belfast City Hall (December).
- Sure Start Fairs, Newtownabbey (December) and Ardoyne (March).
- Freeze Campaign, Stormont Buildings (December).
- Winter Ready Clinic (Volunteer Now)- Donegall Pass, Ballysillan Leisure Centre, Iverary, Anderstown Leisure Centre, Ozone Complex at Ormeau Park(all December).

At these events staff attended to discuss water conservation and distribute leaflets and a selection of promotional items and advice on using water wisely.

Talks are presented twice a month to community groups including:-

- Homestart - mother and toddler groups.
- Rotary and Probus groups.
- Church groups.
- Allotment and gardening groups.

The WET promotes water efficiency at their Education Centre, at 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.

A variety of water efficiency promotional items are used whilst delivering these talks which include:

- Water-butt leaflets.
- Drought resistant gardening leaflets and seeds .
- Promotional and educational leaflets.
- School water audits.
- Interactive games encouraging conservation .
- Hippo bags and instructions.
- Shower timers (5mins).
- Fridge magnets.
- Water cycle poster (teacher's aid).

All of the 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 Relations Centre (CRC) or from communication to the Education Team. For 2013/14 NI Water has distributed 1178 CDD's at school visits, community talks, shows and at the request of an organisation. Each teacher we came into contact with was also issued with a sample. Community Groups receiving presentations on conservation also received a hippo bag.

The calculation for the water savings achieved in 2013/14 report year is as follows:

$$S*O*F*(D*I) = \text{Savings in litres}$$

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 2010-11 to 2014-15 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 Hippo Bags 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:

$$2.5*2.5*5*(1178*0.7) = 25768.75 \text{ l/per day} = 0.02576875 \text{ MI/d}$$

A drop from 0.0361 MI/d, the previous year this is due to reduced attendance at shows.

2. Distribution of Water Butts

For the report year 2013/14 NI Water have not distributed water butts to households, but has to community groups and schools the total for this year is 12.

The calculation for the water savings achieved in 2013-14 report year is as follows:

$$S=V*F*1*N$$

S= savings per butt, V=volume of waterbutt, 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 12, 190l butts) the fills per year is estimated at 6 and the installation rate is 100%.

Calculation:

$$190 * 6 * 1 * 12 = 13680 \text{ l per year:}$$

$$13680 / 365 \text{ days} = 37.4795 \text{ l per day} = 0.00003748 \text{ MI/day}$$

3. Household Water Audits

During 2013/14 the self-water audit for domestic households which can be accessed through the company's website, there have been 101 hits to the on line 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.

4. Domestic Self Water Audit Packs

Over the report year 2013/14 WET continued its conservation campaign "Spread the Word" to distribute self-audits to the parents of school children. For each school visited by the Team, the Principal was asked to distribute NI Water Domestic Water Audits to all families within their school. Every school that entered received Hippo Bags for their toilets. A school returning 75% completed audits received a water saving pack including a water butt, trigger hose and gel bag. The school with the highest percentage of returns will receive a cash prize. This initiative will run until the end of May 2014, for completed audits, no interest to date.

From the figures supplied by IT division of the Corporate Affairs Team, 101 hits have been recorded, for observations of, the on line water audit.

To calculate the savings achieved through this initiative it is necessary to make assumptions on the savings achieved (Ofwat Water Efficiency Targets 2010-11 to 2014-15). The percentage acted upon is assumed at 10% saving 10 litres per property per day:

$$\text{Calculation: } 101 * 0.10 * 10 = 101 \text{ l/per day} = 0.00010 \text{ MI/d}$$

5. Shower Timers

Over the reporting year 2735 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 2010-11 to 2014-15) a saving of 5 litres per property per day can also be assumed. The calculation for the savings achieved in 2013-14 report year is as follows:

$$D * I * S = \text{Savings in litres}$$

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

$$\text{Calculation: } 2735 * 0.23 * 5 = 3145.25 \text{ l/per day} = 0.00314525 \text{ MI/d}$$

6. Gel Bags

The gel bags were distributed as part of the allotment group talks shows. Using the Ofwat Water Efficiency Targets 2010-11 to 2014-15) a saving of 0.1 litres per property per day can also be assumed. Installation percentage would be 25% due to their distributed method

The calculation for the savings achieved in 2013-14 report year is as follows:

$$D * I * S = \text{Savings in litres}$$

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

Calculation $30 * 0.25 * 0.1 = 7.5 \text{ l/per day} = 0.0000075 \text{ MI/d}$

7. Trigger Guns

61 trigger guns were distributed through allotment talks and at staff water efficiency stands.

Using the Ofwat Water Efficiency Targets 2010-11 to 2014-15) a saving of 2 litres per property per day can also be assumed and 100% installation if requested ie at staff stands or through CRC.

The calculation for the savings achieved in 2012-14 report year is as follows:

$$D * I * S = \text{Savings in litres}$$

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

Calculation $61 * 1 * 2 = 122 \text{ l/per day} = 0.000122 \text{ MI/d}$

8. Shower Heads

The shower heads were distributed as requested with 28 in total.

Using the Ofwat Water Efficiency Targets 2010-11 to 2014-15) a saving of 29 litres per property per day can also be assumed and 100% installation if requested.

The calculation for the savings achieved in 2013-14 report year is as follows:

$$D * I * S = \text{Savings in litres}$$

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

Calculation $28 * 1 * 2 = 56 \text{ l/per day} = 0.000056 \text{ MI/day}$

9. Water Audits Completed by Company

No audits were completed in the homes of customers 2013/14

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 the number of times the washing machine and or dishwasher is used.

Non-household

NI Water operates a larger user discount scheme which is dependent on the commitment of the customer to water efficiency. The customer will have to be seen to be 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)

Work was carried out on NI Water's website; an area was developed to deal with promoting 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.

Water Audits

During 2013-14 334 Water Audits for Schools were distributed by WET through Teachers Packs.

No Commercial Audits were distributed as the document is available on line as an advice leaflet for business customers during the year "Advice for Business Customers" with an additional document "Business Water Audit". Due to cost restrictions these leaflets have not been published but are available on the NI Water website.

To calculate the savings achieved through this initiative it is necessary to make assumptions on the savings achieved (Ofwat Water Efficiency Targets 2010-11 to 2014-15). 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: $334 * 0.20 * 10 = 668$ l/per day = 0.000668 MI/d

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 the cost will be 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 consisting of two full time employees. The Environmental Education Manager and the Outreach and Learning Officer, who deliver presentations to a variety of community and youth groups, organise/attend external events as well as attend educational establishments at all levels. Conservation classroom presentations are given on demand and we work with the Eco Schools Award scheme. The double decker Waterbus, a mobile education unit provides displays, quiz, demonstrations, DVD and computer facilities. This exhibition 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 have been written for Key Stage 1 (P1-P4) and Key Stage 2 (P5-P7) and we work closely with the revised curriculum. The service is well received by Education and Library Boards and we have been in contact with over 6260 pupils delivering water conservation messages alone. NI Water has a Wastewater Heritage Centre sited at Duncrue in Belfast. This site provides an insight into the history of water supply and removal of waste and the importance and techniques of wastewater management. We consider contact with school children 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.

During the reporting year 2013/14 NI Water has updated the look of its existing website (www.niwater.com). It continues to support its educational microsite. "What are you doing about water" (<http://www.niwater.com/education/index.html>) for ages 6 to 14 years, builds upon the efficiency element. Sections include the Water Cycle and Save Water. The subsection "How much water" calculates a household's daily use of water, "How do I save water" gives advice in the home and tips for water use in the garden and within schools. It has been well received by both teachers and pupils and is widely used for "investigation" in the revised curriculum and is a valuable tool to both schools, education establishments and the company. The Education Teachers Pack "Teachers Little Helper" has 6 Conservation Worksheets for pupils.

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 also 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 fitted to houses and business, which would help them to be more efficient in the future.

"U-Tube" video on "Saving Water" (featuring the Education Department staff), was made by NI Water's Corporate Affairs Team and is available to view at <http://www.youtube.com/northernirelandwater>. It promotes water saving tips around the home and garden.

During the year we ran a pilot programme promoting water efficiency to the staff at the Head Office at the Westland site. Staff were encouraged to select Hippo bags, shower timers, trigger guns along with the literature "Domestic Audit" and "How Waterwise are You?" Initially the uptake was good, but slowly petered out as the majority of staff have now selected what they require. This initiative continues. Available for download within the business section of water efficiency is the "Top Ten Tips for Business Water Efficiency".

NI Water has highlighted throughout the year the issue of water efficiency and in particular the potential for frozen pipes as part of its "Winter Preparation Campaign". The tag line "Beat the Freeze" ran with the generic message of "Two-Step Pipe Check". The 'Two-Step Pipe Check' campaign continued to receive coverage throughout this period, generating 26 articles valued at £35,435. With 100% Prime Positive publicity achieved, this narrative was well received by the press, with many publications, including the Irish News, describing it as a successful campaign. The "Lag and Tag" message involved the distribution of a fluorescent "Stop Tap Valve tag" which helped customers to be aware of their stop valve and its location in the event of a burst this was accompanied by a leaflet drop to domestic and commercial customers.

A large number of winter meetings were attended, targeting specifically ones aimed at the elderly in preparation for winter, council organised events and stakeholder events. Distribution was from school children, to estate agents and commercial businesses, each was told what to do to prevent frozen pipes and what to do if they got a burst it was positively received. In support of this campaign several videos are downloadable from NI Water on U-Tube: "Protect your Pipes"; Insulation; Winter Proof Your Home; "How to locate your Stop Valve"; "If a pipe burst" and "Don't Wait Insulate".

Efficiency Method	Total	Cost	Savings per MI/ day
Household			
Measurable Methods			
Cistern Devices (0.57p each)	844+334 =1178	671.46	0.02577
Water butts (£38.16 each)	12	457.95	0.00004
Self-audit	101		0.00010
Total			0.02591
Other Measurable Methods			
Shower timers (£1.10 each)	1113 + 1622=2735	3008.50	0.00315
Gel Bags (£4.75 each)	30	142.50	0.00000
Trigger Guns (£4.83 each)	61	294.63	0.00012
Shower Heads (£27.90 each)	28	78.20	0.00006
Education Depart (UKWIR)		56,759.16	0.18900
Total			0.19233
2.Leaflets			
How water wise are you (0.10p each)	6292+ 623= 6915	691.50	
Hippo Bag Leaflet (0.13p each)	1178	153.14	
Freezing Pipe (0.017p each)	5116 + 8922=24038	408.65	
Total leaflets		1, 253.29	
3.PR items			
Bookmark- "Flo" kids (0.07p each)	1113	77.91	
Magnet-H2O magnet (0.26p each)	30	7.80	
Game: Snakes and Ladders (0.18p each)	2+ 334=336	60.48	
Stop Tags (0.43p each)	13709 + 5116=18825	8094.75	
Tap cover (£4.66 each)	581	2707.46	
Ice scraper (0.73p each)	2199	1605.27	
Thermometer (0.76p each)	2019	1534.44	
Total PR		14088.11	
Non Household			
School Audits(0.19p each)	334	63.46	0.00067
Total			0.21891

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 stand at £1253.29.

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

Assumed Savings

- Household-Water Efficiency Methods = 0.02591
- Other Water Efficiency Methods= 0.19233
- Non Household-Water Efficiency Methods = 0.00067
- The total recorded savings are **0.21891** MI/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 change activity 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 Low, Medium and High Levels of engagement.

This is summarised in the following table:

Level of Engagement	MI/day
High	0.173
Medium	0.015
Low	0.001
Totals	0.189 MI/day

The increase in the contact with schools through the Waterbus (high level engagement) has ensured the MI/day has increased to 0.189 MI/day from last year's figure of 0.175MI/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 MI/day
2010/11	0.216 MI/day
2011/12	0.264 M/l day
2012/13	0.227 M/l day
2013/14	0.219 MI/day

This slight reduction in savings is due to a reduction in externally organised specialised resulting in a reduction in distribution by half of Hippo Bags, shower timers, shower heads and trigger guns. NI Water instead concentrated on an increased activity in the Waterbus visits which attributes to a higher level of engagement and so an overall higher level of savings for this element.

Water Efficiency Plan



Northern Ireland Water
PO Box 1026
Belfast BT1 9DJ

email: waterline@niwater.com
www.niwater.com
Waterline 08457 440088

INTRODUCTION

Northern Ireland Water (NI Water) supplies approximately 710 million litres of high quality drinking water each day to Northern Ireland's 1.7 million population, with each person using an average 150 litres per day. Research has indicated that demand will increase over the next twenty years. Water is a valuable resource and it makes sense to use it wisely and reduce waste as much as possible. This plan describes how NI Water is promoting the efficient use of water throughout Northern Ireland.

Modern living has a continuous increasing demand for water. To meet this demand, more water must be taken from the environment, treated and transported. For every cubic meter of water and wastewater that NI Water produces and treats, there is approximately 1.2 kW/h of electricity used. This represents approximately 0.6 kg of CO₂ emissions. If NI Water and its customers are efficient in water use, this will reduce the amount of water that has to be extracted and help to ensure that there is enough water, both now and in the future. Using water wisely may help to lessen the effects of climate change.

NI Water monitors the demand for water to ensure that supplies are sufficient and regularly reviews its policies to achieve this.

WATER EFFICIENCY PROMOTION

1. NI Water will promote both within the company and externally the efficient use of water
2. Utilise local media to raise public awareness about water efficiency
3. NI Water has an extensive schools and community education programmes which are used to raise the awareness about water efficiency
4. School education programme highlights the potential for water reduction usage in schools
5. NI Water will seek to engage with other public and private to promote water efficiency
6. Utilisation of the company's website
7. Public education:
 - Leaflets and brochures
 - Public displays
 - Public speaking engagements
 - Editorials
 - Exhibitions
 - Events



WATER EFFICIENCY WITHIN NI WATER

Water efficiency starts within the organization of NI Water.

- It will be an integral part of the new NI Water Head Office
- Where possible within existing buildings, NI Water will fit a number of water saving devices into offices and operational sites and minimize the use of water
- Promotion of water efficiency advice will be given for NI Water staff in the work place and through the company's in-house magazine, "Waterline"
- It will undertake audits of its own offices and operational sites
- NI Water is committed to minimising water use, as part of the process of producing water for delivery into the public water supply system. The company has reviewed its water treatment plants across Northern Ireland and has improved water efficiency, where it was practical to do so
- In wastewater treatment works, NI Water where practical to do so, re-use effluent for screening
- Operational procedures will be kept under review to help ensure good management practices are with respect to the operational use of water
- The efficient use of water is incorporated into the design of all proposed water and wastewater plants
- Sewer jetting encourages a contractor to re-use water to wash the blockages within the sewers so saving water.
- Our suppliers have been looking at minimizing the use of water



NI Water will continue to highlight to customers the need to use water wisely.

This is done in a variety of ways



COMMUNICATION

NI Water fully recognise that the success of the Water Efficiency Plan depends on a partnership approach with its customers and stakeholders, encouraging customer participation. As part of the initiative, a small-scale and complementary promotional and awareness campaign will be delivered, to attempt to encourage people to take up the initiative and reduce their water consumption. NI Water will make this Water Efficiency Plan freely available to the public on request from Customer Services and downloadable online. Its availability will be advertised through press involvement at its launch.

EDUCATION

NI Water has an excellent education programme which includes school, community and public components. It is extremely diversified, and at the numerous events we attend, water saving devices ('Hippo' Bags, shower timers, key rings with leakline number and various bookmarkers) are distributed, along with other educational material and leaflets.

NI Water's Education Team was established in April 2007, with two members of staff, it consists of the Education Manager and the Outreach and Learning Officer who service the whole of Northern Ireland.

The current and on going water efficiency initiatives are summarised as follows:

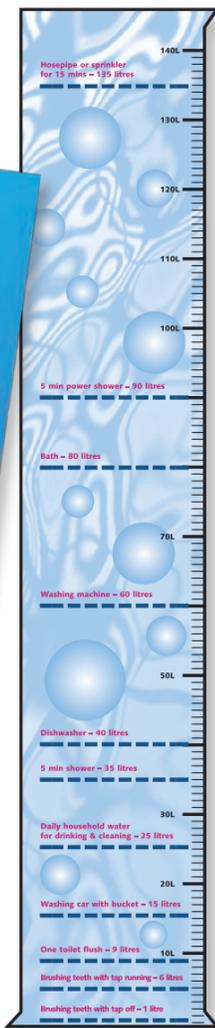
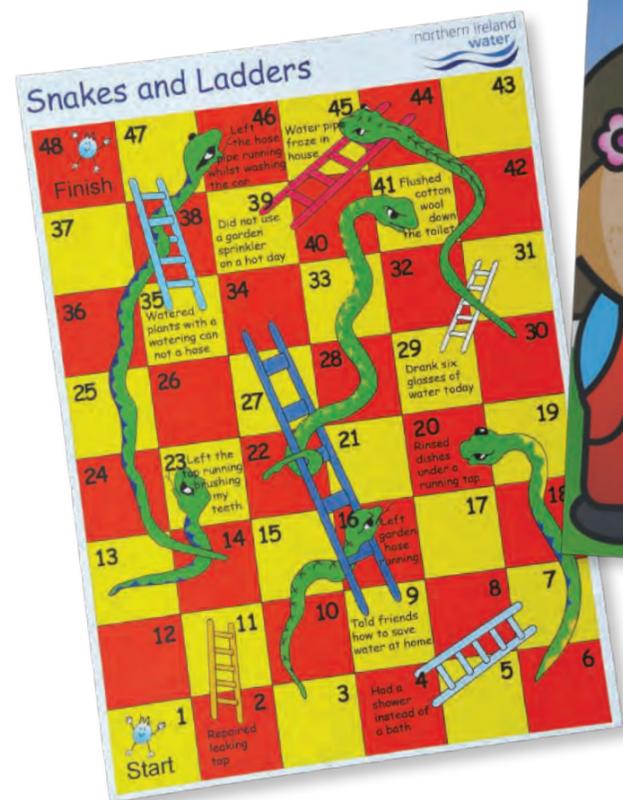
- Schools - Water Bus - a double decker bus transformed into a mobile education unit. It concentrates on the many aspects of water and is suitable for Key Stage 1 and 2 pupils
- Schools – Classroom Visits
- Treatment Works Visits
- Education Centres - Silent Valley (Co. Down) and Heritage Centre (Belfast)
- Summer Camps Schemes
- Community Events
- Web Site
- Save Water Competition
- Promotional items
- Conservation presentations to community, residential and local groups





Promotional Materials

- Each pupil (P1 -P7) receives a pencil – “Use water wisely”, a fridge magnet “Save water”, P4-P7 bookmarker (measuring cylinder), Flo bookmarker (conservation) also water cycle leaflet
- Teachers receive a ‘Hippo’ Bag, conservation Snakes and Ladder game, bookmarker (measuring cylinder), fridge magnet, water cycle, “Bag it and Bin it” and Use Water Wisely leaflets, School Water Audit, “Water Family” PC game (conservation presentations only)



Lifestyle Green Show Castle Espie.



World Water Day 2009, at IKEA.

- Community presentations each person receives a ‘Hippo’ Bag, bookmarker (measuring cylinder), fridge magnet, shower timer, “Bag it and bin it” and “Use Water Wisely” leaflets
- At external events the conservation message is widely re-enforced, staff are available to give advice, distribute leaflets and engage children in activities such as making water basket feeders, playing giant conservation snakes and ladders, conservation bingo and making conservation badges

WEB SITE

- NI Water Education Department. launched an new "Education" microsite in 2008, called- "What are you doing with water"
- The site includes a "Saving Water" section with "Water Use Calculator" including rollovers on a house and garden informing of saving methods
- On the web site we continue to part finance the maintenance and support of www.waterintheschool.co.uk and www.thewaterfamily.co.uk, on-line websites for primary school use
- We are partners for Eco School Award which encourages pupils to monitor water demand within their school and learn about the need for water efficiency at school and at home
- Advice is available online for customers on aspects of conservation and domestic audit can be completed



Education micro-site launch – Chairman, Chris Mellor, at East Belfast school.

WATER AUDITS

Customers are widely encouraged to carry out water consumption audits. Leaflets advising on how to carry out a do-it-yourself water audit are available on request through NI Water Customer Services or downloadable online. This enables all customers to examine how much water they use and includes practical tips for saving water. The Water Audit leaflets have been produced for:

- Commercial Premises
- Home
- Schools



Information Leaflets

As well as Water Audit leaflets, NI Water has a number of leaflets on various subjects relating to Water Efficiency. All are available for download at www.niwater.com/informationleaflets.asp.

- How Water Wise Are You?
- Drought Resistant Gardening
- Waterbutt Leaflet

These provide advice on the sensible use of water whilst giving practical tips on saving water.

The "How Water Wise Are You?" leaflet provides useful tips for saving water in the home and the garden.

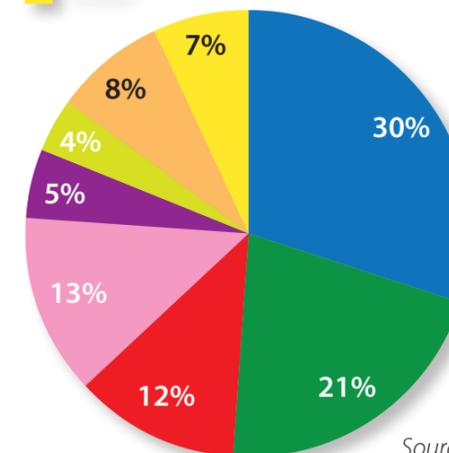
Drought Resistant Gardening suggests the type of plants to select for dry conditions and wise watering tips when caring for your garden in the summer.

WATER EFFICIENCY IN THE HOME

NI Water will actively seek to engage with other organizations to promote water efficiency in the home.

At present the company is working with Northern Ireland Energy Agency to:

- Conduct water audits with domestic customers
- Provide guidance through its website and literature in relation to water efficiency in the home, e.g. "How Water Wise Are You?"
- Provision of free "Cistern Displacement Devices" (CDD's) such as 'Hippo' Bags for domestic customers, with cisterns of 9 litres or more
- Encourage customers to undertake water audits and review how they use water. Customers on average use 150 litres each per day



Source: Waterwise

WATER SAVING DEVICES

'Hippo' Bag

Approximately one third of all water used in the home is flushed down the toilet. Water saving devices, in the form of a 'Hippo' Bag, best suited in older/larger cisterns can reduce the amount of water used to flush the toilet. The bag is easy to install and can save up to 3 litres per flush. These 'Hippo' Bag, with installation instructions, are available free from the Education Department and Customer Services (08457 440088) on request. The introduction of more water efficient double flush toilets indicates the demand for these bags will decrease.



Shower Timers

Five minute shower timers are distributed to conservation groups, schools groups and at community events. Thirty five litres of water are on average used in a five minute shower.

These devices reduce our water consumption, energy and money by saving the time spent in the shower. Many litres of water can be saved daily by taking shorter showers and using water efficient shower heads.



Waterbutts

NI Water also encourages customers to use other water efficient devices, such as water butts and hosepipe trigger nozzles which are readily available at commercial outlets.



ENCOURAGING CUSTOMERS TO USE WATER WISELY

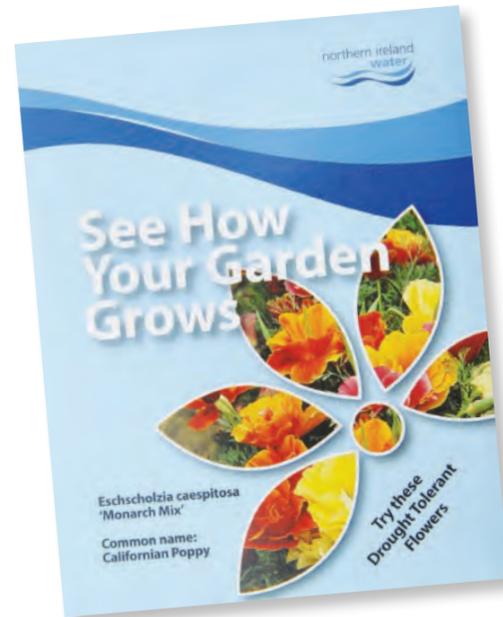
- Turn off the tap when brushing teeth. A running tap wastes over 6 litres of water per minute
- A dripping tap can waste 5,500 litres in one year
- Approximately one third of all clean drinkable water used in the home is flushed down the toilet. When selecting a new toilet system choose a low flush model with a dual flush, this uses only 6 litres or 3 litres on flushing
- In older toilets pre 2001, using 9 litres plus, water can be reduced by placing a 'Hippo' Bag in the cistern. These CCD's save 3 litres per flush
- Take a shower. Use our 5 minute shower timers to help with time/water consumption, 35 litres is the amount used in a normal shower and 90 litres the amount used in a power shower for 5 minutes respectively
- Use water efficient fittings and equipment, e.g. spreading out the tap water by fitting an aerator to taps, makes it feel stronger
- When selecting a new kitchen device i.e. a washing machine or dishwasher check the machine labels to find an energy and water efficient model
- Fully load machines to save water, energy and carbon emissions by using a half load or economy setting
- Filling the kettle to the amount needed for a hot drink saves both water and energy



WATER EFFICIENCY IN THE GARDEN

The effects of climate change and rising temperatures will trigger droughts, food shortages, wars and floods over the next 100 years. Droughts and floods will make agriculture even more vulnerable in developing countries causing wars over water, food and land. This potential for drier summers means we must encourage our customers to use water wisely.

- Rain collected in a water butt can be used to wash windows or water plants, top up ponds or wash cars
- Water loss by evaporation is lessened by watering in early morning or evening when it is cooler
- Placing a planter under hanging baskets to catch the drips reduces the water needed
- Using a watering can instead of a hose. A hose produces 135 litres in 15 minutes, by fixing a trigger nozzle will help to reduce water waste
- Choosing drought resistant plants will help in areas which are prone to dryness
- By placing water retaining crystals into planters, moisture can be kept in the soil
- Recycle washing up water from rinsing and peeling, or washing vegetables or dishes, onto plants in the garden
- Leaflets on gardening advice are widely available at "green events", NI Water events and on request



WATER EFFICIENCY FOR COMMERCIAL CUSTOMERS

- NI Water will continue to meter non-domestic properties for charging purposes. Raising the awareness of water consumption is achieved by the metering of non-domestic properties
- This encourages business and commercial customers to use water efficiently and to monitor its use. Most customers have their meters read twice yearly but larger water using customers have their meters read more frequently. The data collected for billing purposes is also analysed to monitor any large changes in consumption patterns, which can be an indication of leakage or increase in use
- Reduced tariff for large users who demonstrate the implementation of water efficiency measures
- NI Water will work with commercial customers to enable them to carry out water audits
- Water supply (Water Fittings) Regulations Northern Ireland 2009 which were out in August will also help prevent misuse and waste of water



RESEARCH

As well as carrying out its own research, NI Water will continue to take part in the UK Water Industry research projects into water efficiency. NI Water will work with public bodies in promoting water efficiency techniques. NI Water is committed to the promotion of efficient use of water into the future. Water efficiency will continue to take a high priority as a cost-effective way of minimizing demand for water. As a result NI Water will be reviewing its Water Efficiency Plan on regular basis in line with research into best practice.



SUMMARY

Today's image of NI Water may be a water company bringing clean drinking water to all mending and replacing pipes, renewing wastewater centers and monitoring the Governmental approach to billing.

But NI Water's vision over the next ten years and onward must include a strategy to deal with climate change which is already influencing the thinking of those who realise the importance of water, in the environment of the future. The populations use of water will change, wetlands which help with carbon storage will disappear, as the sea level rises and flooding becomes a huge danger. We have to find new ways of dealing with this extra water, we already have the Belfast Sewer Project, but this is only the beginning.

NI Water are becoming more and more aware of the impact of their work on the environment of Northern Ireland and the need to form partnerships with a range of stakeholders. This is in order to educate and give guidance on the biodiversity and economical use of water.



Pupils learn about the importance of water conservation during a visit to Silent Valley Reservoir.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

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

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2010-11	CG	2011-12	CG	2012-13	CG	2013-14	CG	
A DG2 PROPERTIES RECEIVING PRESSURE/FLOW BELOW REFERENCE LEVEL											
1	Total connected properties at year end	000	1	806.4	C2	810.4	A2	818.0	A2	825.0	B2
2	Properties below reference level at start of year	nr	0	2,248	B4	2,020	B3	1,748	B3	1,420	B3
3	Properties below reference level at end of year	nr	0	2,020	B3	1,748	B3	1,420	B3	1,257	B3
4	Properties receiving low pressure but excluded from DG2	nr	0	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	211	B2	171	B2	176	B2	169	B2
4b	DG2 Properties at risk of low pressure removed from the risk register by company action	nr	0	283	B3	262	B3	297	B3	132	B3
4c	Average capex cost of permanent solutions to DG2 problems	£000/prop	1	13.7	C4	3.0	C4	0.8	C4	9.1	C4
B DG3 PROPERTIES AFFECTED BY SUPPLY INTERRUPTIONS											
(i) UNPLANNED INTERRUPTIONS											
5	More than 3 hours	nr	0	529,448	B3	54,303	B3	53,458	B3	41,412	B3
6	More than 6 hours	nr	0	476,289	B3	7,023	B3	10,487	B3	6,742	B3
7	More than 12 hours	nr	0	214,274	B3	765	B3	2,607	B3	1,195	B3
8	More than 24 hours	nr	0	40,959	B3	18	B3	1,554	B3	12	B3
(ii) PLANNED AND WARNED INTERRUPTIONS											
9	More than 3 hours	nr	0	27,547	B3	58,162	B3	50,096	B3	35,468	B3
10	More than 6 hours	nr	0	10,025	B3	31,808	B3	20,674	B3	18,454	B3
11	More than 12 hours	nr	0	0	B3	1250	B3	0	B3	0	B3
12	More than 24 hours	nr	0	0	B3	0	B3	0	B3	0	B3
(iii) INTERRUPTIONS CAUSED BY THIRD PARTIES											
13	More than 3 hours	nr	0	978	B3	1,675	B3	1,778	B3	2,452	B3
14	More than 6 hours	nr	0	699	B3	70	B3	561	B3	121	B3
15	More than 12 hours	nr	0	63	B3	0	B3	1	B3	33	B3
16	More than 24 hours	nr	0	30	B3	0	B3	0	B3	0	B3
(iv) UNPLANNED INTERRUPTIONS (OVERRUNS OF PLANNED INTERRUPTIONS)											
17	More than 6 hours	nr	0	1,418	B3	1,131	B3	311	B3	1,004	B3
18	More than 12 hours	nr	0	2	B3	288	B3	60	B3	20	B3
19	More than 24 hours	nr	0	0	B3	4	B3	0	B3	5	B3
C POPULATION											
20	Population (winter) (total)	000	2	1,814.34	C2	1,823.89	C2	1,842.61	C2	1,850.54	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
22	% population - drought orders	%	1	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

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 AIR14 has remained the same.

The difference between the AIR13 and the AIR14 figures is 7014. The breakdown can be explained as follows;

- 1) New Connections during the 2013/14 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:
 - i) The adding of properties NI Water allegedly didn't know about (This is the gap the Rapid-POINTER Phase 3 project demonstrated and Phase 4 aims to close out).
 - ii) 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.

NI Water recognises there is an anomaly in terms of property numbers (between our 'Customer Contacts and Billing Database' and 'POINTER') – The Rapid-POINTER Phase 3 project has completed a pilot study and Phase 4 will aim to address this issue across Northern Ireland. NI Water hasn't had an update from LPS in terms of domestic data since 2007 – our only form of update has been through customer contact. We recognise there is a need to review the process for both the creating and the demolishing of a property. This will be taken forward as part of our Data Quality work. As part of this work, we are also carrying out analysis and review of both water and sewerage status particularly in terms of data primacy.

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 1420, as reported in line 3 of the AIR13 submission.

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

As per the 2014 regulatory guidance, as issued by NIAUR, this line includes properties within a 10m height of service reservoirs. The final number of properties recognised as being below the reference level at end of year is 1257.

The year end figure is the direct result of removals due to Company Action and better information. Throughout this process a surrogate pressure of 15m head in the adjacent watermain 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 consistent with previous AIR submissions.

The reductions arising from capital schemes are captured within reports received following the completion of watermain rehabilitation or infrastructure improvements. In total NI Water processed eight Post Project Rehabilitation Appraisal (PPRA) reports, see Table 1 below, resulting in 132 properties being removed from the DG2 register due to company action.

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

Rehabilitation Scheme	DG2 Properties Removed
Ballywonard	48
Moyola	12
Newtownabbey	8
Fofanny Banbridge	22
Alleyhill	5
Cookstown Ph 3	7
Cookstown Ph 2	7
Ballintemple	23
Total	132

Ballywonard PPRA - This scheme covers an area of 98.25km² situated in the North Belfast region. The work package supplies an estimated 12,500 properties and contains 280km of water mains. As a result of work completed 48 DG2 properties were removed from the register.

Moyola PPRA - This includes the towns of Maghera and Magherafelt and covers a total area of 440.9km²; the work was completed in the 11/12 financial year. It included 51km of new mains and 6.6km of abandoned mains and resulted in the removal of 12 DG2 properties.

Newtownabbey PPRA – Newtownabbey work package consists of a total area of 53.98km² in North East Belfast. Construction started in Aug 2011 covering 39km of mains and the package removed 8 DG2 properties from the company register.

Fofanny Banbridge PPRA – The study zone consists of an area in Co. Down of 465km². Proposed work is based around 35km of mains rehab with construction started in June 2011 resulting in the removal of 22 DG2 properties.

Alleyhill PPRA – The Alleyhill Work Package Zone covers an area of 307km² including urban areas such as Strabane, Newtownstewart and Kesh. As a result of the mains rehabilitated under this work package 5 properties were removed from the register.

Cookstown PPRA – This portion of work was divided into 2 packages – phase 2 & 3. Together these areas total 425km² and during the work undertaken 112km of mains was rehabilitated. This work package enabled the removal of 14 DG2 properties.

Ballintemple PPRA - The Ballintemple work package covers an area of 355km² to the west of Newry. The area encompasses 613km mains. The rehabilitation of the work package area allowed for the removal of 23 DG2 properties.

The above detail would confirm that in line with the submission included within the company PC13 Business Plan there is a phasing assumption in relation to the removal of properties from the register equivalent to approximately one year.

A total of 31 properties were removed from the register as a result of better information. 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

Work Package Area	DG2 Properties Removed
Ballywonard	11
Moyola	4
Newtownabbey	1
Fofanny Banbridge	5
Alleyhill	2
Cookstown Ph 3	3
Cookstown Ph 2	2
Ballintemple	3
Total	31

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

Table 3

Year Start	1420
Removals due to PPRAs	132
Removals due to better information	31
End of year Total	1257

Line 4 – Properties receiving low pressure but excluded from DG2

As per NIAUR guidance, 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.

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 169 properties experience a pressure below the 7.5 m 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 via removal reports resulting from both Rehabilitation schemes and Infrastructure improvements. See Table 4 below.

Table 4

Removals Due to Company Action	Number
Rehabilitation Schemes	132
Infrastructure Improvements	0
	132

The final number of properties removed due to Company Action is recorded in Table 4 above as 132. This has exceeded the annual target of 118 by 14.

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 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. This is consistent with the process included in the company PC13 Business Plan.

Work Packages awaiting PPRA

A spreadsheet listing the Work Packages awaiting the completion of PPRA reports was produced and it identifies the estimated number of DG2 properties to be removed during 2014/15 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
WP104 Altmore Phase 2	26
WP126 Altmore Phase 3	134
WP120 Killylane	5
WP121 Dunore East	5
	170

Work Packages Outstanding	No. of Props to be Removed
Dungonnell	22
Ballintemple	6
	198

Removals Pending

It should be noted that there are currently 170 properties identified for removal from the register in 14/15 due to planned operational work and the submission of PPRA Reports. However a total of two reports could not be fulfilled during the 13/14 year. This is a result of delays being incurred during rehabilitation work. The areas affected are Dungonnell & Ballintemple and their approximate removals of 22 & 6 will by necessity be moved into the 14/15 year. Therefore the total number of properties planned for removal during the 14/15 year is 198. However these are subject to the completion of rehabilitation works, collation of pressure data and submission of completed reports.

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 third 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 the Ballywonard, Moyola, Newtownabbey, Fofanny Banbridge, Alleyhill, Cookstown Phase 2 and Phase 3 and Ballintemple were produced during 2013-14 which removed a total of 132 properties from the register. These are detailed in Table 7 below.

Table 7

WP Title	DG2 Properties Removed	Total Cost
Ballywonard	48	£0
Moyola	12	£86,181.66
Newtownabbey	8	£70,196.89
Fofanny Banbridge	22	£654,310.32
Alleyhill	5	£0
Cookstown Phase 3	7	£44,162.70
Cookstown Phase 2	7	£155,668.34
Ballintemple	23	£192,695.56
TOTAL	132	£1,203,215.47
Average Cost per DG2 Removal		£9,115.27

The hydraulic models were used to size the replacement mains with a future demand calculated using the 2002 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.

Therefore the average overall cost of removing a DG2 property from the register is obtained by dividing the total cost £1,203,215.47 by the total number of properties removed 132.

Average cost per DG2 removal = £9,115.27

Further work packages

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 2014/15 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 for removal.

Table 8

Work Package Name	No of properties to be removed
WP104 Altmore Phase 2	26
WP126 Altmore Phase 3	134
WP120 Killylane	5
WP121 Dunore East	5
TOTAL	170

Removals Pending

It should be noted that there are currently 170 properties identified for removal from the register in 2014/15 due to planned operational work and the submission of PPRA Reports.

However a total of two reports could not be completely fulfilled during the 2013/14 year. This is a result of delays being incurred during rehabilitation work. The areas affected are Dungonnell and Ballintemple and their approximate removals (over and above those removed above) of 22 and 6 will by necessity be moved into the 2014/15 year. (Although the cost of these may be included in this year's costs due to the complexity of allocating cost to individual DG 2 removals within a package).

Therefore the total possible number of properties planned for removal during the 2014/15 year could ultimately reach is 198. However these are subject to the completion of rehabilitation work, collation of pressure data and submission of completed reports.

This scenario might give a slightly higher cost figure for removals for this year and a slightly lower figure for next year. A more accurate figure overall for NIW might be to average this year's removal cost along with next year's.

Confidence Grade Line 4c

A confidence grade of B2 is therefore proposed for this data line.

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 824,974 as confirmed by Customer Systems in AIR14 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 and unwarned Interruptions

AIR	DG3 Properties Affected	2011/12	2012/13 Inc. Adverse Weather	2012/13 Exc. Adverse Weather	2013/14
Line 5	More than 3 hours	54,303	53,458	51,588	41,412
Line 6	More than 6 hours	7,023	10,487	8,731	6,742
Line 7	More than 12 hours	765	2,607	1,019	1,195
Line 8	More than 24 hours	18	1,554	62	12

Unplanned and unwarned interruptions lasting more than 3 hours

The number of properties affected by unplanned interruptions lasting more than 3 hours reduced from 53,458 in 2012/13 to 41,412 in 2013/14, a reduction of 12,046 properties (22.5%). This reduction was attributed to a combination of factors as summarised below.

There was a reduction in the number of unplanned interruptions involving more than 2,000 properties. These incidents are uncommon and even one or two additional incidents in a year can significantly change the outturn. In 2012/13 there were 3 such incidents including a burst trunk main at [REDACTED] Portadown on 25 June 2012. The total number of properties affected by these incidents was 7,764. In 2013/14, there was 1 such incident, a burst trunk main at [REDACTED] Belfast on 27 July 2013. The number of properties affected by this incident was 3,200.

With the impact of the [REDACTED] incidents removed, around 5,000 fewer properties were affected by unplanned interruptions caused by burst mains/main repairs and this may have been attributed to the mild winter weather. According to the Met Office's provisional summary for the first three months of 2014, mean temperatures over the UK were well above the long-term average for all three months.

The AIR13 outturn was heavily influenced by the snow storms and resultant power failures in March 2013, accounting for 1,870 of the outturn number of properties affected.

Unplanned and unwarned interruptions lasting more than 6 hours

The number of properties affected by unplanned interruptions lasting more than 6 hours reduced from 10,487 in 2012/13 to 6,742 in 2013/14, a reduction of 3,745 properties (35.7%). The 2013/14 outturn was a record low for the Company and was attributed to a combination of factors as summarised below.

The AIR13 outturn was heavily influenced by the snow storms and resultant power failures in March 2013, accounting for 1,756 of the outturn number of properties affected.

With the impact of the adverse weather removed, there was a reduction in the number of unplanned interruptions involving more than 200 properties. In 2012/13 there were 12 such incidents affecting a total of 5,205 properties. In 2013/14 there were 4 such incidents affecting a total of 3,191 properties.

Unplanned and unwarned interruptions lasting more than 12 hours

The number of properties experiencing unplanned interruptions lasting more than 12 hours increased by 1,842 between 2011/12 and 2012/13 and decreased by 1,412 between 2012/13 and 2013/14. The 2012/13 outturn included 1,588 properties affected by the adverse weather in March 2013. The 2013/14 outturn was higher than the 2011/12 outturn because of an incident on 8 March 2014 involving a burst trunk main at [REDACTED] Londonderry.

Unplanned and unwarned interruptions lasting more than 24 hours

In 2013/14, 12 properties experienced an unplanned interruption lasting more than 24 hours compared to 1,554 in 2012/13 and 18 in 2011/12. The 2012/13 outturn included 1,492 properties affected by the snow storms and resultant power failures in March 2013.

Planned and warned interruptions

AIR	DG3 Properties Affected	2011/12	2012/13	2013/14
Line 9	More than 3 hours	58,162	50,096	35,468
Line 10	More than 6 hours	31,808	20,674	18,454
Line 11	More than 12 hours	1,250	0	0
Line 12	More than 24 hours	0	0	0

The number of properties experiencing planned and warned interruptions lasting more than 3 hours, decreased by 8,066 between 2011/12 and 2012/13 and by a further 14,628 properties between 2012/13 and 2013/14.

The number of properties experiencing planned and warned interruptions lasting more than 6 hours, decreased by 11,134 between 2011/12 and 2012/13 and by a further 2,220 properties between 2012/13 and 2013/14.

The decrease in planned and warned interruptions in 2013/14 when compared to 2012/13 is primarily due to a decrease in meterage installed under the Water Mains Rehabilitation Programme. Water main distribution meterage installed in 2013/14 was 235km compared to 317km in 12/13 and 509km in 2011/12.

The reduction in the outturn numbers of affected properties over the last three years has not been as great as it might have been, due to the influence of an increased percentage of work carried out in urban areas. Based on an analysis of interruptions lasting more than 6 hours, there were 62 affected properties per km of mains laid in 2011/12, 65/km in 2012/13 and 82/km in 2013/14. The increased rate in 2013/14 was most likely attributed to the £10m of work packages commenced in North, West and South Belfast, where the density of housing is greater than elsewhere in the province.

For the second year in succession, no properties experienced a planned and warned interruption lasting more than 12 hours.

For the seventh year in succession, no properties experienced a planned and warned interruption lasting more than 24 hours.

Interruptions	1,068	25	2.34	506	9	1.78	551	20	3.63
Properties	32,939	1,131	3.43	20,985	311	1.48	19,458	1,004	5.16

The number of properties experiencing overruns of planned interruptions lasting more than 12 hours, decreased by 228 between 2011/12 and 2012/13 and by a further 40 properties between 2012/13 and 2013/14.

In 2013/14, 5 properties experienced an overrun of a planned interruption lasting more than 24 hours compared to 0 in 2012/13 and 4 in 2011/12.

Additional information on performance against alternative standards

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

Number of properties experiencing unplanned and 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	11/12 Outturn		11/12 KPI Target		12/13 Outturn Inc. Adverse Weather		12/13 Outturn Exc. Adverse Weather		12/13 KPI Target		13/14 Outturn		13/14 KPI Target	
	(Props)	(%)	(Props)	(%)	(Props)	(%)	(Props)	(%)	(Props)	(%)	(Props)	(%)	(Props)	(%)
>6 hrs	7,023	0.867	7,880	0.97	10,487	1.282	8,731	1.067	7,673	0.94	6,742	0.817	7,473	0.91
>12 hrs	765	0.094	1,700	0.21	2,607	0.319	1,019	0.125	1,650	0.20	1,195	0.145	1,600	0.19
>24 hrs	18	0.002	80	0.01	1,554	0.190	62	0.008	80	0.01	12	0.001	80	0.01

Note 1: Percentage outturns are based on total connected properties as follows: 810,367 (AIR12); 817,960 (AIR13); 824,974 (AIR14)

The yearend outturns for properties affected by unplanned and unwarned interruptions confirm that NI Water has achieved all three of its 2013/14 DG3 KPI targets, its > 6 hours target by 731 properties (0.089%), its > 12 hours target by 405 properties (0.049%) and its > 24 hours target by 68 properties (0.008%).

In 2012/13, NI Water failed all three of its DG3 KPI targets because of the adverse weather in March 2013. With the impact of the adverse weather removed, NI Water still failed its > 6 hours target because of an incident involving a burst on the 12 inch inlet to Greenhill Gauge Tank.

In 2011/12, all three yearend outturns were better than the KPI targets.

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 2013/14 whose Interruption Start Date/Time and All Props Restored Date/Time fell within the hours of 12 midnight and 7am.

Interrupt Type	Interrupt No.	Interruption Start		All Properties Restored		Duration (Hours)	Properties Affected		
		Date	Time	Date	Time		> 0 Hrs	> 3 Hrs	> 6 Hrs
Unplanned	21878	09/05/13	01:00	09/05/13	04:30	3.5	504	504	0
Unplanned	22042	04/06/13	01:00	04/06/13	06:00	5	500	500	0
Unplanned	22520	17/07/13	00:00	17/07/13	04:00	4	0	0	0
Unplanned	22794	18/08/13	00:00	18/08/13	06:30	6.5	9	9	9
Unplanned	23259	29/10/13	01:45	29/10/13	05:15	3.5	6	6	0
Unplanned	23709	23/12/13	00:00	23/12/13	05:15	5.25	31	31	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. Step testing is usually carried out at night to reduce the impact of loss of supply to customers.

6 unplanned interruption records and 0 planned and warned interruption records have been identified where customers would not have noticed the loss of service because it occurred at night. 5 of the unplanned interruptions lasted 6 hours or less. The number of properties affected by unplanned interruptions was 1,050 representing 2.5% of the total number of properties experiencing unplanned interruptions lasting more than 3 hours in 2013/14.

$$\text{Unplanned: } (1,050 / 41,412) \times 100 = \mathbf{2.5\%}$$

NI Water reported in its AIR13 commentary that there were 14 unplanned interruptions and 3 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 9,200, representing 17.2% of the total number of properties experiencing unplanned interruptions lasting more than 3 hours in 2012/13.

Interruptions of 3 hours or less occurring at night

Routine step tests continue to be carried out at night and normally last no longer than 3 hours.

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

The following table provides a summary of all the overruns of planned and warned interruptions lasting between 3 and 6 hours in 2013/14.

Interrupt. No.	Month	Duration (Hours)	Properties Affected		Duration Of Overrun (Hours)
			> 0 Hrs	> 3 Hrs	
21769	Apr-13	5.25	1	1	1.5
EP001	Apr-13	5.25	31	31	1.75
22966	Sep-13	6	10	10	1
23364	Oct-13	4.5	496	496	4.25
23366	Oct-13	5.25	63	63	0.25
23577	Nov-13	4.5	17	17	2
23533	Dec-13	4.25	14	14	0
23793	Dec-13	5.5	262	262	0.25
24112	Feb-14	4	18	18	3
23901	Feb-14	4.75	18	18	0
24261	Mar-14	3.5	115	115	1
24365	Mar-14	4.5	23	23	0.75
24426	Mar-14	6	20	20	2

There were 13 overruns of planned and warned interruptions lasting between 3 and 6 hours. The number of properties affected by these overruns was

$$1 + 31 + 10 + 496 + 63 + 17 + 14 + 262 + 18 + 18 + 115 + 23 + 20 = \mathbf{1,088}$$

This number is small compared to the number of properties that experienced a planned and warned interruption of between 3 and 6 hours (17,014).

$$\begin{aligned} \text{T2: L9} &= 35,468 \\ \text{T2: L10} &= 18,454 \\ 35,468 - 18,454 &= \mathbf{17,014} \end{aligned}$$

NI Water reported in its AIR13 commentary that there were 9 overruns of planned and warned interruptions lasting between 3 and 6 hours. The number of properties affected by these overruns was 258.

3 of the records relate to a period of adverse weather on 27 December. These incidents were the subject of Upward Reports 046 and 048. 21887 was the subject of Upward Report 007. And ITS Record 7 was the subject of Upward Report 041.

In terms of numbers of properties affected, the most significant incident occurred in May 13 when a power failure lead to a loss of communications at Dromore Service Reservoir and as a result, the reservoir went to empty. 157 properties experienced an unplanned interruption of more than 3 hours as a result of the incident.

This was also the most significant incident in terms of duration as 11 properties experienced an unplanned interruption of 22.75 hours.

Percentage impact of electricity supply failures on annual outturns

	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs
Numbers of Properties Affected by Electricity Supply Failures	423	181	11	0
Numbers of Properties Affected by Unplanned Interruptions	41,412	6,742	1,195	12
Percentage Impact	1.02%	2.68%	0.92%	0.00%

The impact of the electricity supply failures was greatest on the >6hr outturn, accounting for 2.68% of the total number of properties affected by unplanned interruptions.

Percentage impact of electricity supply failures on target compliance

	> 6 Hrs	> 12 Hrs	> 24 Hrs
Percentage of Connected Properties Affected by Electricity Supply Failures	0.022%	0.001%	0.000%
KPI Target	0.906%	0.194%	0.010%
Percentage of Annual Target	2.42%	0.69%	0.00%

The impact of the electricity supply failures was greatest on >6hr KPI target compliance, amounting to 2.42% 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 60 supply interruption incidents during 2013/14 and lasting more than 3 hours for which Upward Reports were generated. *For full details of these incidents, please refer to the Upward Reports.*

Ref	Interrupt No.	Date of Incident	Description of Incident	Duration	>0 hrs	>3 hrs	>6 hrs	>12 hrs	>24 hrs	Category
001	21989	11/04/2013	Burst main, ██████████ Limavady	6	155	155	0	0	0	3
002	21729	17/04/2013	Burst main, ██████████ Brookeborough	6.75	9	6	0	0	0	3
003	21892	21/04/2013	Telemetry failure, Crawfords Hill SR	4.25	204	10	0	0	0	3
	21893			5.75	1,266	252	0	0	0	
	21894			8.25	151	151	151	0	0	
004	21758	23/04/2013	Burst main, ██████████, Mallusk	4.25	13	13	0	0	0	Precautionary
005	21754	23/04/2013	Burst trunk main, ██████████ Newtownstewart	4.75	604	604	0	0	0	3
006	EP047a	26/04/2013	Burst main, ██████████ Limavady	7.75	192	192	192	0	0	3
	EP047b			5.25	16	16	0	0	0	
	EP047c			5.25	4	4	0	0	0	
007	21887	09/05/2013	Power failure, ██████████t WPS, Newtownabbey	12	36	36	36	0	0	Precautionary
008	22048	20/05/2013	Burst main, ██████████ Cushendall	6.25	106	105	1	0	0	3
009	22045	22/05/2013	Burst main, ██████████, Doagh	4	35	35	0	0	0	3
010	22052	29/05/2013	Comms. problem and airlock issues, Dromore SR	6	99	99	0	0	0	3
	22053			12	47	47	47	0	0	
	22054			22.75	11	11	11	11	0	
011	22218	05/06/2013	Burst main, ██████████, Ballymoney	4.5	304	304	0	0	0	3
012	22143	12/06/2013	Fire hydrant abuse, Belfast	17.5	130	130	26	7	0	Precautionary
013	22215	07/06/2013	Burst main, ██████████ Kilrea	3	10	0	0	0	0	3
	22216			4	10	10	0	0	0	
014	22210	15/06/2014	Burst on North Down trunk main	3.5	1	1	0	0	0	3
	22254			30.75	2	2	2	2	1	
015	22138	18/06/2013	Burst main, ██████████ Fivemiletown	4	13	13	0	0	0	3
	22139			1	2	0	0	0	0	
	22140			2	1	0	0	0	0	
	22141			0.5	2	0	0	0	0	

Ref	Interrupt No.	Date of Incident	Description of Incident	Duration	>0 hrs	>3 hrs	>6 hrs	>12 hrs	>24 hrs	Category
	22142			10	21	21	21	0	0	
016	22155	18/06/2013	Burst pumping main from Ballinliss Pumping Station	4	49	49	0	0	0	3
017	22324	18/06/2013	Burst main, ██████████, Enniskillen	29.5	5	5	0	0	0	3
018	22278	23/06/2013	Burst main, ██████████, Downpatrick	17.25	26	25	25	25	0	2
019	22529	03/07/2013	Burst main, ██████████, Kells	4	1,800	1,800	0	0	0	3
020	ITS 1	05/07/2013	Burst distribution main supplying ██████████ ██████████, Newcastle	11.15	1	1	1	0	0	3
	ITS 2			5.75	450	450	0	0	0	
	ITS 3			10.15	203	203	203	0	0	
021	22598	16/07/2013	Fire hydrant abuse, Belfast	2.5	9	0	0	0	0	Precautionary
	22599			4.25	6	6	0	0	0	
	22600			3.75	4	4	0	0	0	
	22601			1.75	17	0	0	0	0	
	22602			6	21	21	0	0	0	
	22603			4.5	20	20	0	0	0	
022	22417	27/07/2013	Burst trunk main, ██████████, Belfast	14.5	4,173	3,200	2,240	2	0	2
023	22526	02/08/2013	Burst main, ██████████ ██████████ Belfast	14	34	34	34	34	0	3
024	22703	02/08/2013	Burst main off ██████████, Keady	4	1,070	1,070	0	0	0	3
025	22762	07/08/2013	Burst on inlet trunk main to Monaclough SR, ██████████, Armoy	9.5	10	10	2	0	0	3
026	22622	07/08/2013	Burst main, ██████████ Templepatrick	8.25	893	11	11	0	0	3
027	22641	09/08/2013	Burst main, ██████████ Portaferry	17.5	68	68	68	68	0	3
	22642			19.75	1	1	1	1	0	
028	22636	13/08/2013	Burst main, ██████████, Tempo Clabby DMA	10	40	4	3	0	0	Precautionary
029	22811	15/08/2013	Burst main, ██████████ Ballymoney	11	41	41	41	0	0	3
030	22708	18/08/2013	Burst trunk main adjacent to ██████████ Coalisland	23.25	75	75	75	75	0	3
031	23129	21/08/2013	Burst main, ██████████ Londonderry	8.25	14	14	14	0	0	3
032	EP089	29/08/2013	Burst main, ██████████ Larne	4	237	237	0	0	0	3

Ref	Interrupt No.	Date of Incident	Description of Incident	Duration	>0 hrs	>3 hrs	>6 hrs	>12 hrs	>24 hrs	Category
033	22800	04/09/2013	Burst main, ██████████ Brookeborough	7.75	11	6	0	0	0	3
034	22835	08/09/2013	Burst main, ██████████ Belfast	14.5	35	35	35	35	0	3
	22836			3.75	6	6	0	0	0	
035	22855	10/09/2013	Burst main, ██████████ Lisnaskea	9.75	10	10	10	0	0	3
036	23024	24/09/2013	Burst main, ██████████ Ballygawley	5.25	67	4	0	0	0	3
037	23080	29/09/2013	Burst main, ██████████ Larne	7	69	69	69	0	0	3
	23081			3	57	0	0	0	0	
038	23149	03/10/2013	Burst trunk main, ██████████, Greyabbey	11.5	124	124	124	0	0	3
039	23284	09/10/2013	Fault developed in distribution system at ██████████, Londonderry	13.25	88	84	84	3	0	3
040	23418	22/11/13	Burst trunk main, ██████████, Omagh	10	186	186	1	0	0	3
041	ITS Record 1	25/11/13	Power Blip across NI	1.22	2	0	0	0	0	3
	ITS Record 2			1	4	0	0	0	0	
	ITS Record 3			1	1	0	0	0	0	
	ITS Record 4			2	10	0	0	0	0	
	ITS Record 5			2.88	2	0	0	0	0	
	ITS Record 6			1	1	0	0	0	0	
	ITS Record 7			6	4	4	0	0	0	
	ITS Record 8			3	1	0	0	0	0	
042	ITS Record 1	25/11/13	Burst on Ballygrainey SR outlet main, Hollywood	4.42	595	595	0	0	0	3
	ITS Record 2	25/11/13		4.42	8	8	0	0	0	
	ITS Record 3	26/11/13		4.58	267	267	0	0	0	
	ITS Record 4	26/11/13		5.5	269	269	0	0	0	

Ref	Interrupt No.	Date of Incident	Description of Incident	Duration	>0 hrs	>3 hrs	>6 hrs	>12 hrs	>24 hrs	Category			
	ITS Record 5	26/11/13		11.92	50	50	50	0	0				
	ITS Record 6	26/11/13		1	1	0	0	0	0				
	ITS Record 7	26/11/13		4	27	27	0	0	0				
	ITS Record 8	26/11/13		5	51	51	0	0	0				
	ITS Record 9	26/11/13		4.5	2	2	0	0	0				
	ITS Record 10	27/11/13		3.92	151	151	0	0	0				
	ITS Record 11	27/11/13		3.5	55	55	0	0	0				
	ITS Record 12	27/11/13		4.08	72	72	0	0	0				
	ITS Record 13	27/11/13		4.42	77	77	0	0	0				
	ITS Record 14	27/11/13		1.5	8	0	0	0	0				
	ITS Record 15	27/11/13		1.5	38	0	0	0	0				
	ITS Record 16	27/11/13		1.5	1	0	0	0	0				
	043	23506		01/12/13	Burst main, ██████████ Ballyclare	2	28	0	0		0	0	3
		23507				22.5	17	17	17		17	0	
	044	23501		02/12/2013	Burst trunk main, ██████████ Ballymoney	7.25	34	33	4		0	0	3
	045	ITS Record 1		13/12/2013	Burst on Ballygrainey SR outlet main, Hollywood	4.67	236	236	0		0	0	3
ITS Record 2		6.5	23			23	23	0	0				
ITS Record 3		5.75	239			239	0	0	0				
ITS Record 4		4.25	32			32	0	0	0				
ITS Record 5		5.9	32			32	0	0	0				

Ref	Interrupt No.	Date of Incident	Description of Incident	Duration	>0 hrs	>3 hrs	>6 hrs	>12 hrs	>24 hrs	Category
	ITS Record 6			5	101	101	0	0	0	
	ITS Record 7			4.83	99	99	0	0	0	
	ITS Record 8			5.25	99	99	0	0	0	
	ITS Record 9			3.83	96	96	0	0	0	
	ITS Record 10			5.5	233	233	0	0	0	
	ITS Record 11			5.75	222	222	0	0	0	
	ITS Record 12			6	44	44	0	0	0	
	ITS Record 13			3.25	44	44	0	0	0	
	ITS Record 14			5	31	31	0	0	0	
	ITS Record 15			11.5	58	58	58	0	0	
046	23718	27/12/2013	Power failure affecting Alt North Booster Station	5.25	7	7	0	0	0	3
047	23721	27/12/2013	Burst on outlet main from Tullyframe SR	14.75	34	34	34	1	0	3
048	23722	26/12/2013	Power failure, Deehommed WPS	2	2	0	0	0	0	3
	23723	27/12/2013		11.5	49	49	49	0	0	
	23724	27/12/2013		7.25	38	38	6	0	0	
049	23717	31/12/2013	Burst main, ██████████ Belfast	55.75	504	12	12	12	6	Precautionary
050	23820	26/01/2014	Burst main, ██████████ Larne	30.5	5	5	5	5	5	3
	23821	27/01/2014		3	8	0	0	0	0	
051	24137	05/02/2014	Burst trunk main, ██████████ Antrim	12	5,669	5,669	5,669	0	0	3
052	ITS Record A	31/01/2014	Burst main, ██████████ Hillsborough	11	103	103	103	0	0	3
	ITS Record B	31/01/2014		5.5	175	175	0	0	0	
	ITS Record C	31/01/2014		4.33	227	227	0	0	0	

Ref	Interrupt No.	Date of Incident	Description of Incident	Duration	>0 hrs	>3 hrs	>6 hrs	>12 hrs	>24 hrs	Category
	ITS Record D	31/01/2014		5.75	227	227	0	0	0	
	ITS Record E	31/01/2014		5.25	91	91	0	0	0	
053	24156	03/02/2014	Burst trunk main, ██████████ Bushmills	4	10	10	0	0	0	3
054	24108	09/02/2014	Burst on gravity outlet main of Ballyknock SR, ██████████ Maghera	4.5	32	32	0	0	0	3
055	24158	12/02/2014	Storm damage to ██████████ Rostrevor affecting NI Water assets	5	18	18	0	0	0	Precautionary
	24159	13/02/2014		6	17	17	0	0	0	
056	24168	23/02/2014	Burst trunk main, ██████████ Brookborough	12	44	44	43	0	0	3
057	24104	27/02/2014	Burst main, ██████████, Belfast	7	500	500	22	0	0	Precautionary
058	24409	03/03/2014	Burst trunk main, Lough Braden Gravity Flow	9.5	24	24	24	0	0	3
059	24404	08/03/2014	Burst on Carmoney - Dupont trunk main, ██████████ Londonderry	21.25	949	949	499	499	0	3
060	24383	21/03/2014	Burst trunk main from Ballintemple SR to Ballinliss WPS/SR, Newry	10.25	58	58	19	0	0	3
	24384	21/03/2014		2	1	0	0	0	0	

The KPI targets as percentages and numbers of total connected properties are listed below, together with the corresponding monthly target allowances.

KPI	2013/14 Target		Monthly Target Allowance			
			Apr to Oct		Nov to Mar	
	%	Properties	%	Properties	%	Properties
>6hrs	0.906	7,473	0.053	440	0.107	879
>12hrs	0.194	1,600	0.011	94	0.023	188
>24hrs	0.010	80	0.001	5	0.001	9

In order to determine the unplanned interruption events which had the greatest negative impact on performance in 2013/14, the Company compared the monthly actuals with the three KPI target profiles and identified 6 instances where a target was exceeded. These instances are highlighted in bold text in the table below.

		May 13	Jul 13	Aug 13	Oct 13	Mar 14
>6 hour	Actual	510	2,608	272	397	650
	Target	440	440	440	440	879
>12 hour	Actual	42	153	175	147	499
	Target	94	94	94	94	188
>24 hour	Actual	0	0	0	0	0
	Target	5	5	5	5	9

The Company then reviewed its DG3 Register and identified the 6 incidents responsible for the underperformance. The incidents are summarised below.

Major Incidents

Burst main, [REDACTED], Cookstown (Ref: Interrupt No. 21963)

On 11 May, 200 properties in Mayobridge experienced an unplanned interruption of 8.5 hours due to a burst located in a 4 inch section of distribution main at [REDACTED] Cookstown. According to the Service Failure Analysis Report, the main was found to be in poor condition and had split along its full length.

The impact of this incident in terms of percentages of connected properties affected was **0.024%** >6hrs.

Leak at air valve, Dromore (Ref: Interrupt No. 22306)

On 1 July, 90 properties in Dromore experienced an unplanned interruption of 20.25 hours due to a leak at an air valve. The leak was detected in the late evening and the decision was taken to turn off the supply and carry out the repair the following morning. The occurrence of airlocks delayed the restoration of supply to all properties by several hours. As part of the interruption fell within the hours of midnight and 7am, customers would have been unaware of the full impact of the incident.

The impact of this incident in terms of percentages of connected properties affected was 0.011% >6hrs and **0.011%** >12hrs.

Burst main, [REDACTED] Belfast (Ref: Interrupt No. 22417)

On 27 July 2013, a burst occurred on the 12 inch trunk main from Ballygomartin Service Reservoir, Belfast. Initially, the incident affected properties both upstream and downstream

of the defect but following the location and isolation of the burst at [REDACTED] only properties in [REDACTED] DMAs remained without supply.

A successful operation to rezone [REDACTED] was completed around lunchtime and as a result, properties in [REDACTED] did not lose supply for more than 6 hours. A number of properties in the lower lying part of [REDACTED] also managed to avoid a loss of supply for more than 6 hours.

The analysis process included a review of pressures using telemetry data from the flow meters and PRV settings for each of the three DMAs. A review of GIS information on ground elevations indicated that a little over half of the affected properties experienced a loss of supply of more than 6 hours.

The incident was the subject of Upward Report 022 and had the highest property count of the year for an unplanned interruption lasting more than 6 hours.

The impact of this incident in terms of percentages of connected properties affected was **0.272%** >6hrs.

Burst main [REDACTED] Dungannon (Ref: Interrupt No. 22708)

On 17 August, 75 properties served by Moy Lough Shore DMA in Coalisland experienced an unplanned interruption of 23.25 hours due to a burst on an 80mm distribution main. The burst was located in a section of main passing through a stream in fields adjacent to the [REDACTED]. The area was initially rezoned to minimise disruption to customers. A sluice valve was installed overnight to enable the burst to be isolated and supply to be restored to all customers. Rezoning from Lisnastraine Service Reservoir was carried out to temporarily boost the supply into the area. A temporary solution involving twin service pipes was used to bridge the burst main and restore supply to the affected properties. The incident was the subject of Upward Report 030.

The impact of this incident in terms of percentages of connected properties affected was 0.009% >6hrs and **0.009%** >12hrs.

Burst main, [REDACTED] Newtownhamilton (Ref: Interrupt No. 23314)

On 19 October, 143 properties served by the Armaghbreague DMA in Newtownhamilton experienced an unplanned interruption of 15.5 hours as a result of a burst on a 6 inch distribution main. According to the Service Failure Analysis Report, the repair was delayed because of access difficulties as the burst was located in a section of main under a bridge. Two hydrants were fitted and a temporary supply set up to feed the affected area.

The impact of this incident in terms of percentages of connected properties affected was 0.017% >6hrs and **0.017%** >12hrs.

Burst main adjacent to Carmoney - Dupont trunk main, [REDACTED], Londonderry (Ref: Interrupt No. 24404)

On 8 March 2014, 499 properties in Londonderry experienced an unplanned interruption of 21.25 hours due to a burst on a 14 inch main adjacent to the 27 inch Carmoney – Dupont trunk main. Following the identification of the location, the burst was isolated and the area rezoned. The repair was deferred to 07:00 on 9 March due to poor ground conditions. The incident was the subject of Upward Report 059.

The impact of this incident in terms of percentages of connected properties affected was 0.060% >6hrs and **0.060%** >12hrs.

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

The AIR09 Reporter recommended the use of consistent accuracy bands.

In 2013/14, there was no change in the processes and procedures used to capture the base data for DG3. Therefore, NI Water has assigned the same 'B3' confidence grade as in previous years.

Justification of Reliability Band 'B'

- There is no reliance on unconfirmed verbal reports, cursory inspections or analysis. Every record in the DG3 Register represents an interruption to supply where the cause has been investigated, identified and recorded by experienced field staff or contractors.
- There is no reliance on extrapolation from a limited sample for which Grade A or B data is available. Every figure reported in Table 2 Lines 5 to 19 is derived from the records in the DG3 Register. Every interruption record includes the category, times and property counts necessary to meet the regulatory reporting requirements of a DG3 Register.
- Although the Company considers its records, procedures, investigations and analysis to be properly documented, its assessment cannot be recognised as the best method. The systems used for capturing DG3 data are independent from other sources of supply interruption data within NI Water such as Rapid Xtra, Ellipse and the GIS. Although these systems are currently used to improve the reliability of the data, the focus continues to be on interruptions lasting 5 hours or more and property volumes exceeding the practicalities of a manual property count.
- There are minor shortcomings. There may be some missing documentation in the form of missing address details and some short duration interruptions may not have been captured.

Justification of Accuracy Band '3'

Whilst there is a possibility that some interruptions may have been overlooked when compiling the DG3 Register, NI Water does not believe their exclusion would account for more than 10% of either the total numbers of reported properties or the total number of incidents.

There is also a possibility that the start and end times of some interruptions may have been subject to inaccuracies, resulting in property counts being assigned to the wrong timebands. Again, NI Water does not believe that these inaccuracies would exceed 10%. Throughout 2013/14, the Company has maintained its policy of comparing the start and end times of unplanned, unwarned and third party interruptions lasting 5 hours or more with the times at which the earliest and latest 'no water' complaints were received from customers, and amending the times where appropriate. By focusing on the higher timebands, inaccuracies have been reduced where they would otherwise have represented a larger proportion of the outturns.

The property counts and times associated with unplanned, unwarned interruptions lasting more than 6 hours are less likely to be inaccurate because of the interest these interruptions generate within the Company and of their impact on KPI performance. It is

unlikely that any incident involving either a large number of properties or a long interruption time would have been omitted from the DG3 Register in error.

Sense checks

NI Water carries out a number of sense checks aimed at ensuring that the data in its Annual Information Return is both reliable and accurate and that the confidence grade is justified.

During the year, Networks Water and Leakage Services Field Managers input a total of 817 records of interruptions lasting more than 3 hours to the Operations Management Information System (OMIS). All records were checked for accuracy and completeness by the Customer Field Managers and were subsequently closed to prevent further editing. Following the extraction of data to spreadsheets, checks were carried out by Customer Systems to ensure that the data remained consistent with OMIS and that no records had been inadvertently deleted or duplicated during migration between worksheets.

During the year, EP generated a total of 666 records of interruptions lasting more than 3 hours. A proportion of records were subsequently compared with the OMIS records to ensure there was no duplication of rehab-related interruptions by Networks Water.

During the year, all interruption records were checked by Customer Systems to ensure that:

- Customers experiencing planned and warned interruptions were provided with adequate advanced notification,
- Interruptions caused by companies working for, or on behalf of NI Water were correctly classed as 'unplanned',
- Interruptions caused by electricity supply failures were correctly classed as 'unplanned',
- Planned interruptions that started before the Planned Start Time were correctly classed as 'unplanned',
- Planned interruptions that finished after the Planned Finish Time were correctly classed as overruns,
- Property counts were not omitted or added in error, and
- All calculations involving the summation of property counts were correct.

'No Water' complaint comparisons

During the year, the Start Times, All Properties Restored Times, address details and property counts of 282 records of unplanned, unwarned and third party interruptions lasting 5 hours or more were compared with the records of 'no water' complaints received in 2013/14 and the interruption records were revised accordingly to ensure consistency with the regulatory guidance. This represents $282 / 689 = 41\%$ of all interruption records within these two interruption categories.

Upward Report Comparisons

During the year, 125 upward reports were circulated within NI Water relating to water supply/distribution issues of which, 60 related to an unplanned loss of supply to properties. The DG3 Register was periodically checked to ensure that there was at least one interruption record to represent the properties affected by each of the 60 incidents identified. As incidents necessitating the circulation of upward reports involve the greatest durations and numbers of affected properties, NI Water is confident that there are no major omissions from the unplanned, unwarned and third party interruption outturns.

Signoff procedure

DG3 performance is monitored on a weekly basis through the circulation of update reports. The data is constantly challenged and there is a signing off procedure involving three levels of management.

Action plan for improvement

NI Water is currently unable to report confidence grades of A2, A3, B2 or better for its DG3 data. However, the Company has made good progress in 2013/14 towards improving data quality and customer satisfaction and has recently commenced the final phase of testing of a replacement system for capturing the details of supply interruptions.

Reporter's recommendations on AIR13 – Progress update

Following the AIR13 audit, the Reporter made two key recommendations relating to DG3 Supply Interruptions. These recommendations are listed below, together with an update on the progress that has been made towards their implementation.

- *Recommend consideration of whether asset information needs to be collected as part of the interruption recording process*

Central Incident Management System (CIMS)

From April 2007 to March 2014, the Operations Management Information System (OMIS) has been used to capture the details of interruptions to supply. In 2014/15, OMIS is due to be replaced with a new system called the Central Incident Management System (CIMS).

The new system will be used 24/7 during both BAU and MIP situations to monitor planned and unplanned interruption events as well as out of sewer flooding and water quality incidents.

The new system has been specifically designed to address all previously identified OMIS shortfalls. Benefits of the new system include the following:

- 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
- *Recommend NI Water considers if any of the initiatives discussed with the Reporter in respect to interruptions would be viable to implement within their operating environment*

NI Water has arrangements in place to mitigate the impact of bursts by using flexible hose to bypass the burst and tankers/bowers to keep the main charged where this is a practical proposition.

Service Failure Analysis Reporting

In 2012/13, the Company introduced a new process whereby Service Failure Analysis (SFA) reports were completed for all unplanned, unwarned interruptions lasting more than 12 hours. In 2013/14, the requirement was extended to include all unplanned, unwarned interruptions lasting more than 6 hours. The process is leading to a greater understanding of the root cause of interruptions and how their impact may be reduced.

Planned and warned interruptions – Refinement of warned duration

The average difference between the warned duration and actual duration of EP planned and warned interruptions continues to reduce. In 2012/13, there were 658 EP planned and warned interruptions lasting more than 3 hours. The average difference between the warned duration and actual duration of these interruptions was 2 hours 47 minutes. In 2013/14, there were 647 EP planned and warned interruptions lasting more than 3 hours. The average difference between the warned duration and actual duration was 1 hour 15 minutes. This illustrates NI Water's commitment to improving customer satisfaction.

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 monthly numbers of bed-spaces sold for hotel, guesthouse and B&B establishments in Northern Ireland in 2013. The information was derived from monthly NISRA tourism bulletins entitled 'Statistics on Accommodation', available as downloads from the Department of Enterprise, Trade and Investment (*DETINI*) website. NI Water has used the information to calculate the percentage of annual bed-spaces sold each month.

MONTH	HOTEL BED-SPACES SOLD	GUESTHOUSE & B&B BED- SPACES SOLD	TOTAL BED-SPACES SOLD	PERCENTAGE OF ANNUAL BED-SPACES SOLD
Jan-13	146,700	28,500	175,200	5.24%
Feb-13	186,800	28,700	215,500	6.44%
Mar-13	216,900	31,000	247,900	7.41%
Apr-13	216,800	41,000	257,800	7.71%
May-13	258,100	64,300	322,400	9.64%
Jun-13	269,300	62,400	331,700	9.92%
Jul-13	262,600	79,200	341,800	10.22%
Aug-13	317,000	85,100	402,100	12.02%
Sep-13	240,600	57,600	298,200	8.92%
Oct-13	256,700	44,900	301,600	9.02%
Nov-13	200,300	32,400	232,700	6.96%
Dec-13	194,000	23,800	217,800	6.51%
Total	2,765,800	578,900	3,344,700	100.00%

The following statistics were derived from Table A2.4 on page 28 of the NISRA report entitled 'Northern Ireland Tourism Statistics October 2012 to September 2013', published on 6 February 2014 and available as a download from the DETNI website.

	Date Range	Overall Nights (000s)
All Visitors (exc. NI Residents)	Jan 13 – Sep 13	7,927

Using the statistics on the previous page, the number of non-resident visitor nights from Jan 13 to Dec 13 was estimated as follows:

$$\text{Percentage bed-spaces sold from Jan 13 to Sep 13} = 5.24 + 6.44 + 7.41 + 7.71 + 9.64 + 9.92 + 10.22 + 12.02 + 8.92 = 77.51 \%$$

$$\text{Non-resident visitor nights from Jan 13 to Sep 13} = 7,927,000$$

$$\text{Estimated non-resident visitor nights from Jan 13 to Dec 13} = (7,927,000 / 77.51) \times 100 = 10,226,582$$

Using the statistics on the previous page and the estimated number of non-resident visitor nights above, the number of non-resident winter visitor nights was estimated as follows:

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.

$$\text{Percentage bed-spaces sold during winter} = 5.24 + 6.44 + 7.41 + 7.71 + 6.96 + 6.51 = 40.27\%$$

$$\text{Estimated non-resident winter visitor nights} = (10,226,582 / 100) \times 40.27 = 4,118,212$$

According to AIR14: Table 7: Line 17, the baseline resident population was $1,827.79 \times 10^3$.

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

$$\text{Estimated average non-resident winter visitors per night} = 4,118,212 / (31 + 28 + 31 + 30 + 30 + 31) = 22,753$$

$$\text{Population (winter)} = 1,827,790 + 22,753 = \mathbf{1,850,543}.$$

Changes in Methodology

Tourism publications have undergone a number of changes in recent years. As well as changes to the consistency and scope of publications, the tourism estimates have been subject to a series of revisions due to improvements to the survey / analysis methodology or the inclusion of data returned after the publication date.

Each year, NI Water reviews all of the latest publications and adopts a methodology which best utilises the information available at the time. However, this does mean that the methodology is more likely to change from year to year.

NI Tourist Board used to have responsibility for conducting the NI Passenger Survey and producing reports on tourism and the provisional annual number of non-resident visitor nights (overseas + RoI tourists combined) was one of the figures they published. Towards the end of their run of responsibility and because of delays in the publication process, it was not possible to obtain a provisional annual figure in time for AIR, only a figure for the period January to September and this was the case for AIR11.

When responsibility for conducting the NI Passenger Survey shifted to NISRA and the responsibility for publishing reports on tourism shifted to DETINI, a combined figure for overseas + RoI tourists was no longer obtainable. Instead, a provisional figure was published from the NI Passenger Survey for overseas tourists alone. The number of RoI visitor nights could only be obtained by going to the Central Statistics Office RoI website and looking within the results of the HOTRA survey. This was the case for AIR12.

When it came to the completion of AIR13, the latest NI Passenger Survey and HOTRA Survey results were for 2011 and there was no choice but to develop a new methodology which did not depend on the use of current data. The new methodology was based on occupancy figures for 2010, 2011 and 2012, the numbers of non-resident visitor nights for 2010 and 2011 and an assumption that there was a relationship between the two sets of figures. The number of non-resident visitor nights for 2012 was estimated by solving a series of three equations.

This year there is a new NISRA publication entitled 'Northern Ireland Tourism Statistics October 2012 to September 2013' which has replaced the earlier style of tourism report. A provisional combined figure for overseas + RoI tourists (January to September 13) is included in the report which the Company has assumed to be more reliable than a figure based on the methodology developed for AIR13.

The AIR14 methodology is based on the provisional number of non-resident visitor nights for January to September 2013 and the number of non-resident visitor nights for 2013 has been estimated by applying a similar assumption as for AIR13, that there is a relationship between the occupancy of hotels and guesthouses/B&Bs and visitor nights.

Unfortunately, these issues make it very difficult to adopt a consistent methodology. If NISRA continues to produce the NI Tourism Statistics report, the Company should be able to use the same methodology for AIR15 it has used for AIR14 which will help to restore some consistency.

This year's estimated non-resident visitor night figure of 10,226,582 is less than last year's figure of 10,538,042. However, the following table shows a re-worked calculation for AIR13 based on data which is now available.

	AIR13
Non-resident visitor nights (Oct 12 – Sep 13)	10,054,000
Non-resident visitor nights (Jan 13 – Sep 13)	7,927,000
Non-resident visitor nights (Oct 12 – Dec 12)	2,127,000
Non-resident visitor nights (Jan 12 – Sep 12)	7,757,000
Non-resident visitor nights (Jan 12 – Dec 12)	9,884,000
% Bed-Spaces Sold in Winter	40.36%

Non Resident Winter Visitor Nights	3,989,439
Winter Nights (Jan to Apr, Nov & Dec)	182
Non Resident Winter Visitors Per Night	21,920
Table 7 Line 17 – Resident Population	1,819,470
Population (winter)	1,841,390

When the AIR13 outturn is recalculated using the AIR14 methodology, the outturn changes from 1,842,612 to 1,841,390. This change is 0.07%.

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

AIR12	CG	AIR13	CG	AIR14	CG
1,823.89 x 10 ³	C2	1,842.61 x 10 ³	C2	1,850.54 x 10³	C2

Based on the re-worked calculation for AIR13, the estimated winter population has increased from 1,841.39 x 10³ in AIR13 to 1,850.54 x 10³ in AIR14, an increase of 9.15 x 10³ (0.50%). This slight increase can be attributed to changes in the component figures that make up this figure i.e. the baseline resident population and the estimated average number of non-resident winter visitors per night.

According to the NISRA report entitled 'Northern Ireland Tourism Statistics October 2012 to September 2013', tourism in Northern Ireland in 2013 was influenced by a number of events including the UK City of Culture Year in Derry-Londonderry, the World Police and Fire Games, 'Backin' Belfast' and the All-Ireland Fleadh. The good weather in the summer of 2013 may also have been an influencing factor.

Confidence Grade

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

1. The NISRA publications 'Statistics on Accommodation' 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 Tourism Statistics October 2012 to September 2013' 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 33,747 (+1.82%). (*see calculation below*)

10,226,582 / (31 + 28 + 31 + 30 + 30 + 31) = 56,500 non-resident visitors

$1,827,790 + 56,500 = 1,884,290$ residents + non-resident visitors
 $1,884,290 - 1,850,543 = 33,747$
 $(33,747 / 1,850,543) \times 100 = 1.82\%$

Lines 21-23 DG4 Restrictions on use of water

Drought orders are not applicable in N.I.

Under Article 36 of the Water and Sewerage Services (NI) Order 1973, when the Department for Regional Development is satisfied that a serious deficiency of supplies of water in any area exists or is threatened, it may make an order to prohibit or restrict the use of water for any purpose (or by means by which the water is used, i.e. hosepipe ban).

The Department may also by order abstract water from any source and suspend or modify any obligation governing the discharge of compensation water for a period not exceeding 6 months.

Northern Ireland Water does not operate a sprinkler license system.

Outturns and Confidence Grades

There were no hosepipe restrictions, drought orders or sprinkler/unattended hosepipe restrictions in 2013/14 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 yet to develop a series of revised DG4 procedures which will clarify the reporting requirements and definitions and the responsibilities of those involved in the reporting process.

Annex A**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 2013/2014 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 AIR14 (dated 31st March, 2014).

Total Connected Properties at Year End	AIR14
Extant Property Total	852,487
<i>less</i>	
Domestic no water / well water	7980
Domestic sewerage only	6
Non-domestic no water / well water	4113
Non-domestic sewerage only	18
Non-domestic measured – not charged (test meters)	1002
Non-domestic site meters	13,675
Non-domestic trade effluent	93
Non-domestic unmeasured – not charged	601
Invalid Classification	25
Total Connected Properties at Year End	824,974

NORTHERN IRELAND WATER LIMITED -ANNUAL INFORMATION RETURN

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

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR 2010-11	CG	REPORTING YEAR 2011-12	CG	REPORTING YEAR 2012-13	CG	REPORTING YEAR 2013-14	CG	
A DG5 ANNUAL FLOODING SUMMARY											
1	Number of domestic properties connected to sewerage system	000	1	612.1	C2	618.5	A2	623.3	A2	628.3	B2
(i) OVERLOADED SEWERS											
2	Properties flooded in the year (overloaded sewers)	nr	0	4	B3	10	B3	189	B3	6	B2
3	Flooding incidents in the year (overloaded sewers)	nr	0	10	B3	15	B3	189	B3	6	B2
4	Flooding incidents (overloaded sewers attributed to severe weather)	nr	0	4	B3	1	B3	181	B3	5	B2
4a	Properties flooded in the year attributed to severe weather	nr	0	10	B3	1	B3	181	B3	5	B2
5	Props. where flooding limited to uninhabited cellars only (o/loaded sewers)	nr	0	0	B3	0	B3	0	B3	0	B2
(ii) OTHER CAUSES											
6	Properties flooded in the year (other causes)	nr	0	28	B3	23	B3	41	B3	55	B2
7	Properties which have flooded more than once in the last ten years (other causes)	nr	0	7	B3	6	B3	15	B3	26	B2
8	Flooding incidents (other causes - equipment failures)	nr	0	4	B3	4	B3	15	B3	14	B2
9	Flooding incidents (other causes - blockages)	nr	0	14	B3	17	B3	22	B3	36	B2
10	Flooding incidents (other causes - collapses)	nr	0	10	B3	2	B3	4	B3	5	B2
11	Props. where flooding limited to uninhabited cellars only (other causes)	nr	0	6	B3	0	B3	0	B3	0	B2
B DG5 PROPERTIES ON THE AT RISK REGISTER											
(i) SUMMARY											
12	2 in 10 register at end of year	nr	0	6	B4	17	B3	30	B3	62	B2
13	1 in 10 register at end of year	nr	0	3	B4	10	B3	10	B3	8	B2
14	Total 1 in 10 and 2 in 10 properties on the register at end of year	nr	0	9	B4	27	B3	40	B3	70	B2
15	1 in 20 register at end of year	nr	0	211	B4	189	B4	153	B3	120	B3
15a	Potential risk of property flooding identified requiring further investigation to assess at risk category.	nr	0	8	B2	0	B2	0	B2	0	B2
16	Props. on the register which have not flooded in the past 10 yrs (excl. severe weather)	nr	0	0	BX	1	B2	32	B3	33	B3
17	Properties which have not flooded internally but suffer restricted toilet use (RTU)	nr	0	0	B3	0	B2	0	B2	0	B2
(iii) ANNUAL CHANGES TO 2 IN 10 & 1 IN 10 REGISTERS											
22	Removed by company action	nr	0	0	B4	0	B3	1	B3	3	B2
23	Removed because of better information	nr	0	705	B4	0	B3	2	B3	0	B2
24	Added because of better information (actually flooded)	nr	0	9	B4	18	B3	16	B3	33	B2
25	Added because of better information (modelled)	nr	0	0	A1	0	A1	0	A1	0	B2
26	Average capex cost of permanent solutions to 1 in 10 & 2 in 10 DG5 problems	£000/prop	1	0.0	B4	0.0	B3	168.8	B3	233.7	B2
(v) ANNUAL CHANGES TO THE 1 IN 20 REGISTER											
30	Removed by company action (1 in 20)	nr	0	4	B4	14	B3	65	B3	8	B2
31	Removed because of better information (1 in 20)	nr	0	0	B4	11	B3	24	B3	45	B2
32	Added because of better information (actually flooded - 1 in 20)	nr	0	215	B4	3	B3	53	B3	3	B2
33	Added because of better information (modelled - 1 in 20)	nr	0	0	A1	0	A1	0	A1	17	B3
34	Average capex cost of permanent solutions to 1 in 20 DG5 problems	£000/prop	1	219.9	B4	148.9	B3	45.1	B3	143.6	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 AIR14 has remained the same.

The difference between the AIR13 and the AIR14 figure is 5004. The breakdown can be explained as follows;

1. New Connections during the 2013/14 reporting year
2. Added as a result of a customer contact. E.g. no water complaint, blocked sewer etc. Within this category there are 2 scenarios:
 - a. The adding of properties NI Water allegedly didn't know about (This is the gap the Rapid-POINTER Phase 3 project demonstrated and Phase 4 aims to close out).
 - b. 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.

NI Water recognise there is an anomaly in terms of property numbers (between our 'Customer Contacts and Billing Database' and 'POINTER') – The Rapid-POINTER Phase 3 project has completed a pilot study and Phase 4 will aim to address this issue across Northern Ireland. NI Water hasn't had an update from LPS in terms of domestic data since 2007; our only form of update has been through customer contact. We recognise there is a need to review the process for both the creating and the demolishing of a property. This will be taken forward as part of our Data Quality work. As part of this work, we are also carrying out analysis and review of both water and sewerage status particularly in terms of data primacy.

Methodology

The total number of domestic properties (including voids) connected to the sewerage system at the end of the reporting year (31st March 2014).

This figure is based on the 31st March 2014 Rapid Property Summary for AIR14.

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 2014
Total Gross Household Sewerage Properties	628,282

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. This process ensures a robust investigation is carried out for all internal flooding reports. An expert panel (the DG5 Panel) examines the evidence for each incident and governs the addition of properties to and removal of properties from the register.

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 AIR14, 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 to be 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 2013 to March 2014 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.
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, 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 14 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 which have not been fully investigated and categorized i.e. Nil for 2013/14.
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

During this reporting period as per the Reporters recommendation NIW are now being more proactive in their approach to repeat blockages. NIW Customer Field Managers (CFM) now have the resource of designated field technicians who are carrying out CCTV investigations on sewers which have repeat blockage complaints and any faults found are being remedied this has helped reduce the number of repeat sewer blockage complaints.

The FIR has remained the same and a completed copy is included (see appendix A.) The Business Unit is proactively ensuring 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 and the Customer and Regulation manager (all NIW) and the MUL Contracts Manager which ensures 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.

This year of the 490 incidents recorded as Internal Flooding NIW excluded 100 due to them being follow-on jobs related to the original complaint. During our further investigations NIW discovered that 3 of the 36 confirmed internal flooding events due to blockages occurred in areas where the property had been extended over a sewer without a build over agreement being in place, NIW are checking what action if any can be used to resolve issues like these. See Appendix B for example.

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

Every reported incident of internal flooding is thoroughly investigated and cross checked with the returned Flooding Incident Report Forms, Operations Staff, Customer Field Managers and Customer where appropriate, 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 now deemed to be B2.

Lines 12 - 34 DG5 Properties on the at Risk Register and Annual Changes**PC13 Outputs**

The PC13 Business Plan included a target for removal of properties from the DG5 Internal Flooding Register by company action, which was as follows:

Year	13/14	14/15	Total
Nr	23	44	67

The number of removals achieved in 13/14 was 11.
It is now unlikely that the target of 67 will be achieved.

Additions to the Register

In year 13/14, 53 no. properties were added to the flooding register. These may be divided into the following categories:

- i) 26 properties within the Sydenham network (East Belfast) which have been added as a result of an ongoing network study. The consultant executing the network study has gathered additional information regarding historic (pre-2013) flooding incidents.
- ii) 17 properties within the [REDACTED] of the Belfast WWTW network. The only recorded internal flooding incidents at these properties relate to 'severe' events. The properties have been added to the register as a result of sewer-network model simulations, including the use of 2-D simulations of overland flow.
- iii) 9 properties at miscellaneous locations, where additional information has become available regarding historic (pre-2013) flooding incidents.
- iv) One property ([REDACTED]) as the result of a flooding incident in year 13/14.

Significant networks

It is notable that over half (101 of 190) of the properties on the Register are within the Belfast WWTW and Sydenham networks; these networks represent approximately 23% of the total population connected to sewer networks. 49 of the properties are in the Sydenham network – which represents only 7% of the connected population.

Confidence grades

All lines have retained the same confidence grade as in AIR 13, with the exception of the following:

- Line 25: 'Added (to the 2 in 10 and 1 in 10 Registers) because of better information (modelled)' - for which the confidence grade has been amended from A1 to B2. It is considered that the confidence grade for this line should be the same as that attached to the Register numbers in general, i.e. Lines 12 and 13.
- Line 33: 'Added (to the 1 in 20 Register) because of better information (modelled)' – for which the confidence grade has been amended from A1 to B3. It is considered that the confidence grade for this line should be the same as that attached to the Register number in general, i.e. Line 15.

Appendix A

**APPENDIX A – Incident Report Form Contractor
Northern Ireland Water – Flooding Incident Report**



Work Order Ref No: 03467689 Name: [REDACTED]

Location: [REDACTED]

Date: 02/10/2013 Arrival time: 13:09

- 1) Internal Flooding: Main Sewer Lateral Sewer
 Adjacent properties flooded Attached garages flooded
 Basements/Cellar flooded Restricted Toilet use
- 2) External Flooding: Main Sewer Lateral Sewer
 Public road/footpath Public area
 Agricultural land Curtilage
- 3) Comments on cause of reported incident: (Select only one category below)
 Blockage Collapsed sewer
 Defective road gully 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
 Cleared. Carson Smylie was contacted.

PHOTO FOR FLOODED JOBS:



Appendix B

APPENDIX A – Incident Report Form Contractor Northern Ireland Water – Flooding Incident Report



Work Order Ref No: 03609973 Name: [REDACTED]

Location: [REDACTED]

Date: 05/01/2014 Arrival time: 14:45

- 1) Internal Flooding:
 - Main Sewer Lateral Sewer
 - Adjacent properties flooded Attached garages flooded
 - Basements/Cellar flooded Restricted Toilet use

- 2) External Flooding:
 - Main Sewer Lateral Sewer
 - Public road/footpath Public area
 - Agricultural land Curtilage

- 3) Comments on cause of reported incident: (Select only one category below)
 - Blockage Collapsed sewer
 - Defective road gully 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

Cleared, crew onsite for 4 hours. Internal flooding in shop. Tiles had to be dug up to locate buried manhole in shop

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		2		3		4	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2010-11	CG	2011-12	CG	2012-13	CG	2013-14	CG
A ANNUAL FLOODING SUMMARY										
(i) OVERLOADED SEWERS										
1	Areas flooded externally in the year (overloaded sewers)	nr	0	B3	313	D6	225	D6	92	D6
2	Curtilege flooding incidents in the year (overloaded sewers)	nr	0	B3	137	D6	97	D6	70	D6
3	Highway flooding incidents (overloaded sewers)	nr	0	B3	108	D6	32	D6	23	D6
4	Other flooding incidents (overloaded sewers)	nr	0	B3	94	D6	96	D6	22	D6
5	Total flooding incidents (overloaded sewers)	nr	0	B3	339	D6	225	D6	115	D6
6	External flooding incidents (overloaded sewers attributed to severe weather)	nr	0	B3	2	D6	29	D6	1	D6
6a	Areas flooded externally attributed to severe weather	nr	0	N/C	2	D6	29	D6	1	D6
(ii) OTHER CAUSES										
7	Areas flooded externally in the year (other causes)	nr	0	B3	N/C		3,212	D6	3,348	D6
8	Areas which have flooded more than once in the last 10 years (other causes)	nr	0	B3	N/C		N/C		N/C	0
9	Flooding incidents (other causes - equipment failure)	nr	0	B3	12	D6	19	D6	23	D6
10	Flooding incidents (other causes - blockages)	nr	0	B3	1,389	D6	3,526	D6	3,293	D6
11	Flooding incidents (other causes - collapses)	nr	0	B3	35	D6	31	D6	73	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	N/C	N/C		0	D6	190	D6
13	1 in 10 register at end of year	nr	0	N/C	N/C		213	D6	7	D6
14	1 in 20 register at end of year	nr	0	N/C	N/C		0	D6	16	D6
15	Total on the 1:10, 2:10, 1:20 register at end of year	nr	0	N/C	N/C		213	D6	213	D6
15A	Potential risk of property flooding identified requiring further investigation to assess at risk category	nr	0	N/C	N/C		N/C		0	D6
(iii) ANNUAL CHANGES TO 1:10, 2:10, 1:20 REGISTER										
20	Removed by company action (external only)	nr	0	N/C	N/C		0	A1	0	A1
21	Removed by company action (external linked)	nr	0	N/C	N/C		0	A1	0	A1
22	Removed because of better information	nr	0	N/C	N/C		0	A1	113	A1
23	Added because of better information (actually flooded)	nr	0	N/C	N/C		213	A1	113	A1
24	Added because of better information (modelled)	nr	0	N/C	N/C		0	A1	0	A1
25	Transferred from external to internal register	nr	0	N/C	N/C		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 2012-13. 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.

Lines 1-11 - Annual Flooding Summary

The total number of 'overloaded sewers' incidents has reduced significantly from years 11/12 and 12/13 to 115.

The total number of 'other causes' incidents has increased from 2715 in 11/12 to 3576.

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

Line 8 - Because the processing of external incidents has been properly executed for only two years, this line cannot yet be populated.

Lines 12-25 - At Risk Register

Early in year 13-14, a cleansing exercise was carried out upon the 213 areas in the register in which:

- 113 areas were removed due to 'better information' and
- the remaining 100 areas, which had all to that time been placed in the 1:10 register, were reassigned to the three register categories.

Coincidentally, 113 areas were added to the register as a result of the process described under 'Lines 1 to 11' above – so leaving the total number of areas at 213.

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

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

NORTHERN IRELAND WATER - ANNUAL INFORMATION RETURN

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

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2010-11	CG	2011-12	CG	2011-12	CG	2012-13	CG	
A DG6 RESPONSE TO BILLING CONTACTS - GENERAL											
1	Total billing contacts	nr	0	104,897	B3	92,832	B2	77,051	B2	78,463	B2
2	Number dealt with within 5 working days	nr	0	103,710	B3	92,808	B2	77,118	B2	78,398	B2
3	Number dealt with in more than 10 working days	nr	0	86	B3	15	B2	26	B2	30	B2
4	DG6 Percentage dealt with within 5 working days	%	2	98.9	B3	99.97	B2	100.09	B2	99.92	B2
5	Percentage dealt with in more than 10 working days	%	2	0.1	B3	0.02	B2	0.03	B2	0.04	B2
B CONNECTED PROPERTIES											
6	Number of properties connected for water supply only	nr	0	147,207	A2	149,579	A2	152,771	A2	155,064	B2
7	Number of properties connected for water and sewerage services	nr	0	659,237	A2	660,788	A2	665,189	A2	669,910	B2
8	Number of properties connected for sewerage services only	nr	0	27	A2	25	A2	25	A2	24	B2

Table 4 – Customer Service 1 (Total)

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.

Lines 1 - 5 - DG6 – Response to Billing Contacts

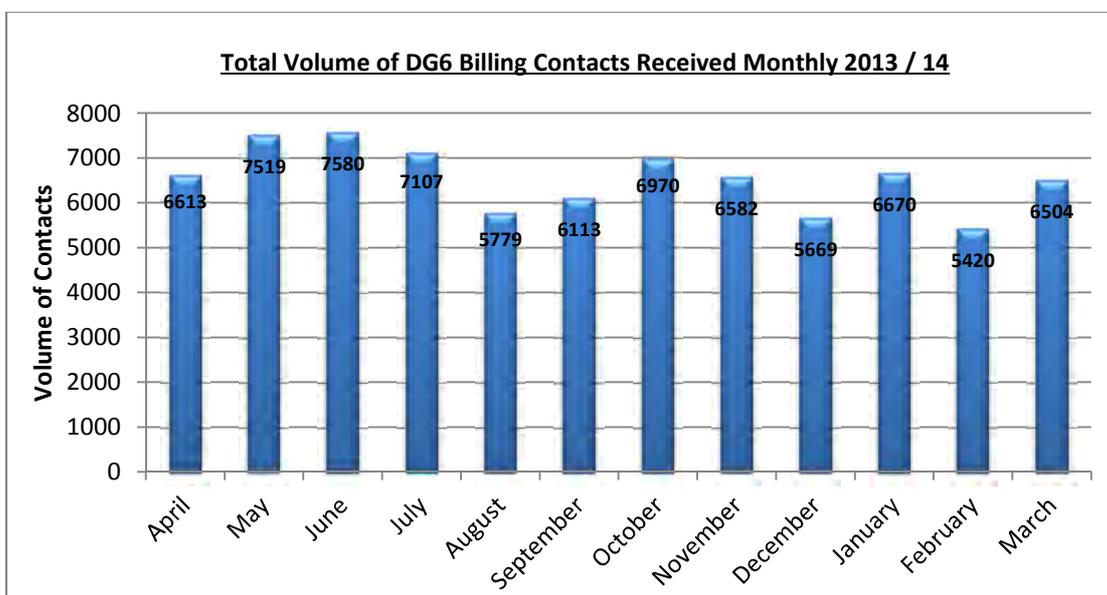
Introduction

This was the seventh year of non-domestic billing by Northern Ireland Water (NIW). Following decision of the Executive, domestic charges continued to be deferred for 2013/14 charging year.

Tariff changes were made effective from April 2013.

DG6 Received Volumes

The chart below shows the monthly profile of DG6 contacts received during 2013/14.



The increase in contacts during quarter one is mainly due to the annual unmetered bill run and is consistent with the trend in previous years.

Top Reasons for customer contact

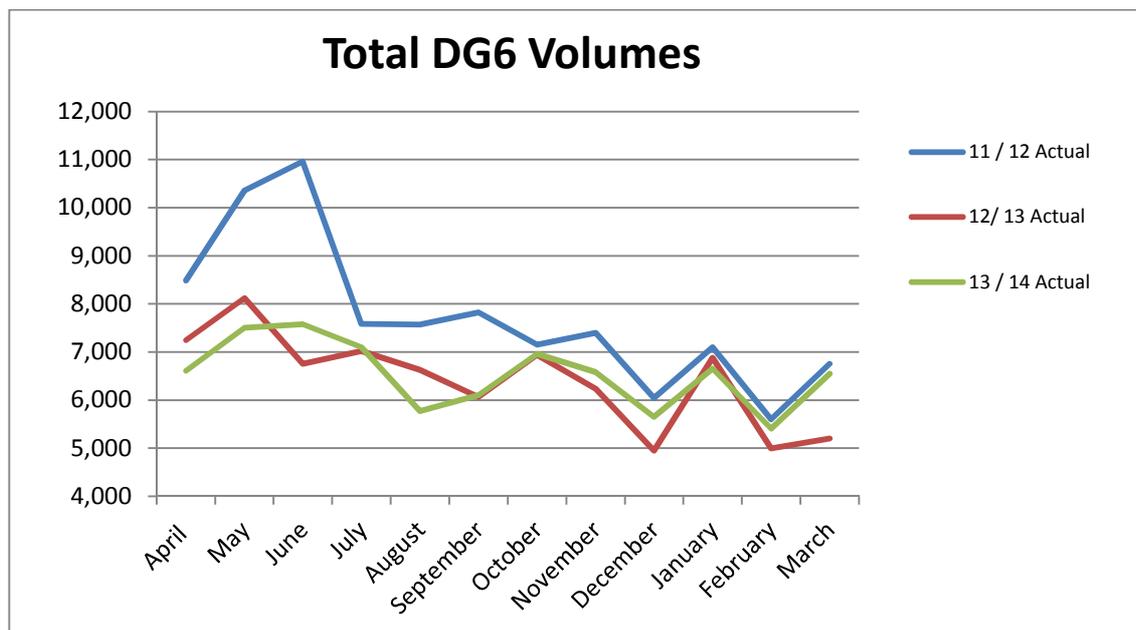
The table below shows the Top 5 billing contact types.

Debit / Credit Card Payment	17%
Promise Of Payment	10%
Customer Contact Details Change	6%
Checking Payment Received	4%
Request Copy Bill	3%

The top 3 reasons for DG6 contacts are considered wanted contacts. The level of debit/credit card payment and promise of payment contacts continues to feature in the top 5 due to continued focus on debt collection activities during the year.

Total DG6 Volumes year-on-year

The chart below shows the DG6 received volumes from 2011/12 to 2013/14.



Written DG6 contacts increased by 2% from 13,785 in 2012/13 to 14,043 mainly due to increase in Direct Debit applications, contacts regarding domestic allowance applications and contacts linked to VAT – these are all considered wanted contacts.

Main written contact increases	2012/13	2013/14	Diff
DD applications	274	411	137
Domestic allowance contacts	1615	1772	157
VAT-related contacts	802	1159	357
Totals	2,691	3,342	651

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.

Billing (DG6) Project

This project completed in 13/14 with the rollout of a new unmetered bill format from April 2013 and a new metered bill format from June 2013; both aimed at assisting with bill understanding. A revised and updated suite of Recovery letters was also implemented from June 2013.

Self Service Platform

Customer Services also initiated the design and development of a Self Service platform in 2013/14. This website will allow customers to manage their own accounts that are registered on the Rapid billing system.

Functionality includes overall summary, billing history, consumption graphs and download of data, bill payment and copy bill facility. Customers can also avail of septic tank desludge requests and an online “Contact Us” facility.

A pilot phase commenced in March 2014 with a small sample of non-domestic customers being asked to provide feedback on the new service. The full rollout is expected in the near future.

Line 6 – Number of properties connected for water supply only

AIR13 figure – 152771

AIR14 figure – 155064

The net increase of circa 2300 properties during the 13/14 year which are connected only for water may be attributed to newly connected domestic dwellings, in rural areas, which have a septic tank.

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

1. New Connections during the 2013/14 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:
 - a. The adding of properties NI Water allegedly didn't know about (This is the gap the Rapid-POINTER Phase 3 project demonstrated and Phase 4 aims to close out).
 - b. 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.

NI Water recognises there is an anomaly in terms of property numbers (between our 'Customer Contacts and Billing Database' and 'POINTER') – The Rapid-POINTER Phase 3 project has completed a pilot study and Phase 4 will aim to address this issue across Northern Ireland. NI Water hasn't had an update from LPS in terms of domestic data since 2007 – Our only form of update has been through customer contact. We recognise there is a need to review the process for both the creating and the demolishing of a property. This will be taken forward as part of our Data Quality work. As part of this work, we are also carrying out analysis and review of both water and sewerage status particularly in terms of data primacy.

Line 7 – Number of properties connected for water and sewerage services

AIR13 figure – 665189

AIR14 figure – 669910

There has been a net increase of circa 4700 properties connected for water and sewerage services during the 13/14 year – refer to Line 6 commentary for further detail.

Line 8 - Number of Properties Connected for Sewerage Services Only

AIR13 figure – 25

AIR14 figure – 24

The number of properties connected for sewerage only has decreased by 1 property during the 13/14 year.

Annex A details the Line Methodology followed for each of the figures calculated in Table 4.

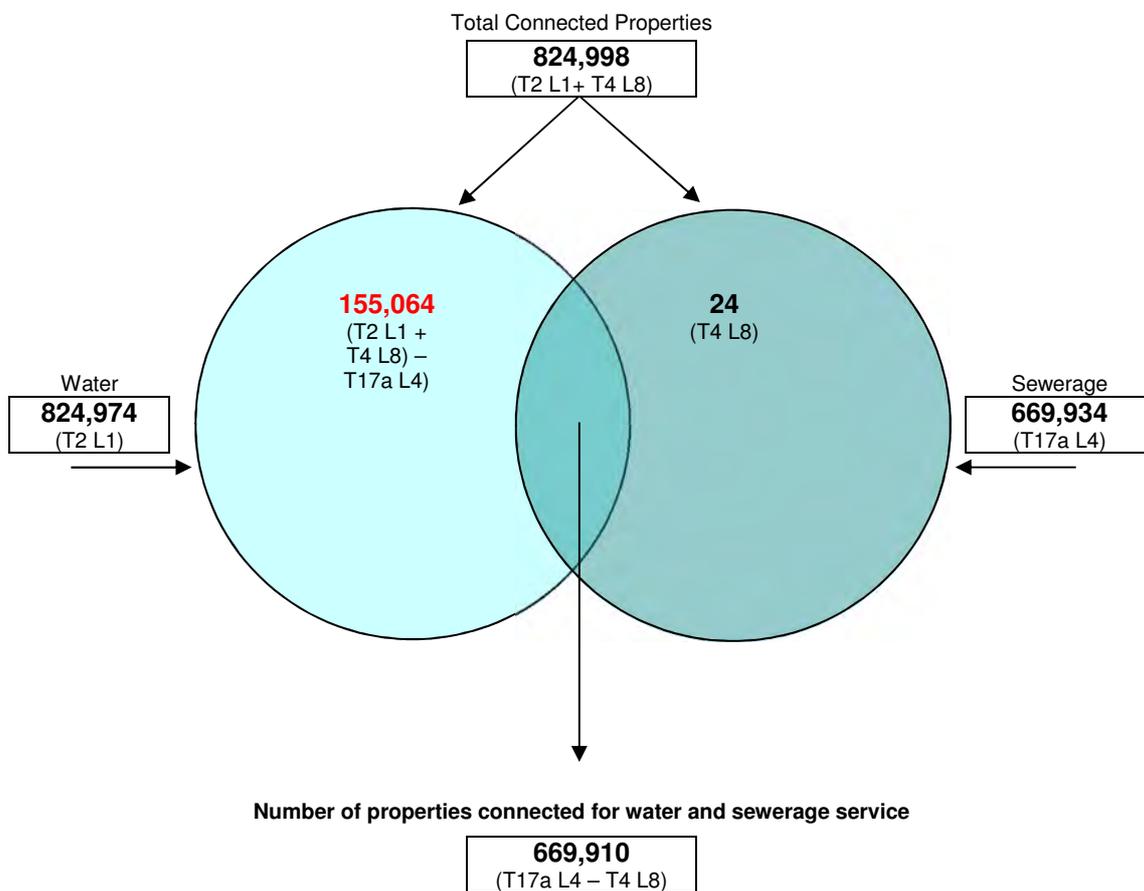
Annex A – Line Methodology for Table 4

Connected Properties

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 AIR14 reporting year. This includes properties which are connected but not billed (e.g. temporarily unoccupied) but excludes properties which have been permanently disconnected.

This figure is taken from the Rapid Property Summary for AIR14 and is displayed in the diagram below:



Therefore:-

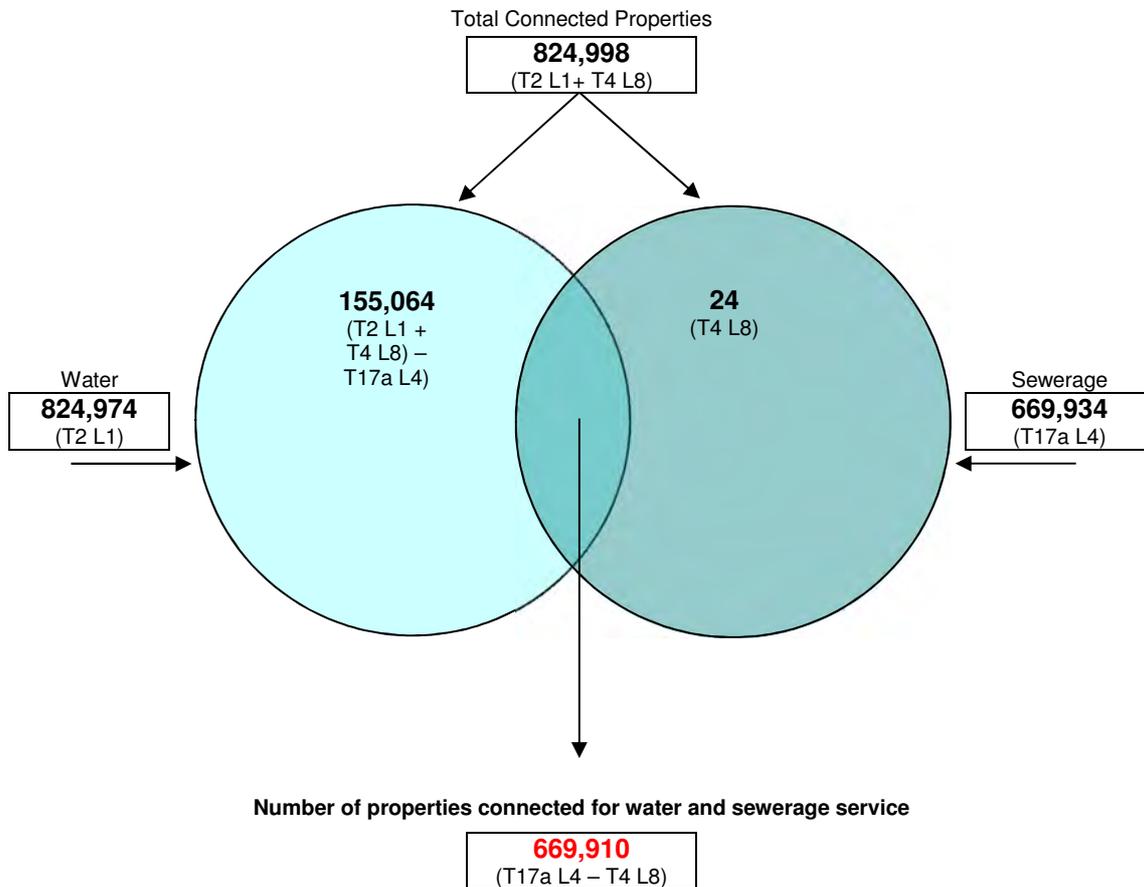
Total connected properties (T2 L1 + T4 L8)	824,998
Less	
Total connected properties for sewerage (T17a L4)	669,934
= Total connected for water only	155,064

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 which are connected but not billed (e.g. temporarily unoccupied) but excludes properties which have been permanently disconnected.

This figure is taken from the Rapid Property Summary for AIR14 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 which are connected but not billed (e.g. temporarily unoccupied) but excludes properties which have been permanently disconnected.

This figure is taken from the Rapid Property Summary for AIR14.

	End March 2014
Domestic sewerage only	6
<i>Plus</i>	
Non-domestic sewerage only	18
= Total properties connected for sewerage only	24

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

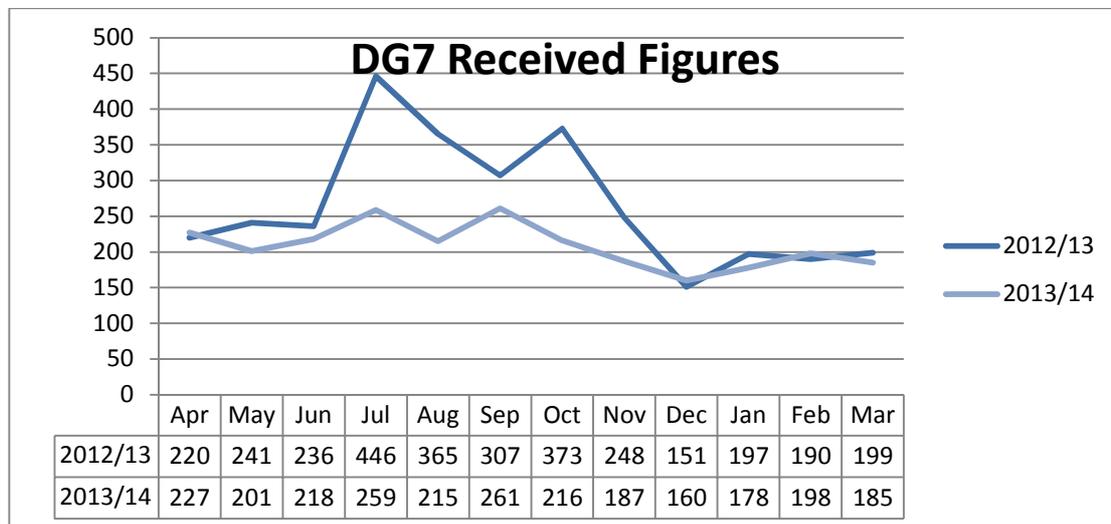
**ANNUAL INFORMATION RETURN - TABLE 5 KEY OUTPUTS
CUSTOMER SERVICE - 2 (TOTAL)**

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2010-11	CG	2011-12	CG	2012-13	CG	2013-14	CG	
A DG7 RESPONSE TO WRITTEN COMPLAINTS											
1	Total written complaints	nr	0	4,327	B2	2,340	B2	3,173	B2	2,505	B2
2	Number dealt with within 10 working days	nr	0	4,326	B2	2,323	B2	3,166	B2	2,498	B2
3	Percentage dealt with within 10 working days	%	2	100.0	A1	99.27	A1	99.78	A1	99.72	A1
4	Number dealt with in more than 20 working days	nr	0	4	B2	0	B2	1	B2	2	B2
5	Percentage dealt with in more than 20 working days	%	2	0.1	A1	0.00	A1	0.03	A1	0.08	A1
B DG8 BILLS FOR METERED CUSTOMERS											
6	Total metered accounts	nr	0	100,071	A1	103,876	A1	110,164	A1	115,227	A1
7	Metered accounts excluded from indicator	nr	0	32,275	A1	36,388	A1	42,688	A1	47,784	A1
(I) NO. OF CUSTOMERS WITH METERED ACCOUNTS RECEIVING AT LEAST ONE BILL DURING YEAR BASED ON METER READING:											
8	Company readings	nr	0	65,028	A1	65,928	A1	66,557	A1	66,775	A1
9	Company or customer readings (or both)	nr	0	65,156	A1	66,057	A1	66,622	A1	66,840	A1
(ii) NUMBER OF CUSTOMERS WITH METERED ACCOUNTS RECEIVING:											
10	Estimated bills only	nr	0	2,394	A1	1,076	A1	550	A1	433	A1
11	No bills received during the report year	nr	0	246	A1	355	A1	304	A1	170	A1
12	Unread by company for 2 years	nr	0	1,048	A1	470	A1	310	A1	186	A1
C DG9 TELEPHONE CONTACT											
13	Total calls received on customer contact lines	nr	0	340,989	A2	231,245	A2	219,399	A2	226,881	A2
14	All lines busy	nr	0	699,566	A2	0	A2	0	A2	0	A2
15	Total of calls not abandoned	nr	0	300,722	A2	229,270	A2	216,006	A2	223,256	A2
16	Call handling satisfaction	nr	2	4.59	A1	4.57	A1	4.54	A1	4.63	A1
17	Total telephone complaints	nr	0	62,507	A2	51,680	A2	73,158	A2	74,316	A2
D SPECIAL ASSISTANCE REGISTER											
18	Customers on the special assistance register	nr	0	1,112	A2	1,990	A2	2,675	A2	2,903	A2

Table 5 – Customer Service 2

Lines 1 - 5 - DG7 Received volumes

The chart below shows the DG7 received volumes during 12/13 and 13/14.



The chart shows a decrease in the overall volume of written complaints received in 13/14 compared to the previous year.

There were no major operational incidents significantly impacting the volume of water or sewerage complaints in any given month.

The increased volumes in July and September can, in part, be attributed to the sum of Water Services and Sewerage Services complaints received during those months being higher than in others throughout the year. Those contacts recorded as linked to “other activities” were higher than in other months during September - there is no identifiable theme contributing to this volume.

As in previous years, the number of written complaints in the “Charges & Bills” category was highest. These were for a variety of reasons, some of which are summarised below:

- Over two hundred complaints were recorded as being from customers disputing liability for their bills for a variety of reasons.
- Almost one hundred complaints were recorded as being about leak allowances or high consumption.

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

Based on data extracted on 15 April 2014:

- 20 DG7 contacts received during 13/14 complaints were open;
- the oldest open DG7 complaint received during 13/14 was 26 working days old;
- 20 DG7 contacts received during 13/14 were open for more than 10 working days, each pending completion of agreed actions as outlined in substantive holding responses; and
- the average age of the open DG7 contacts received during 13/14 was 15 working days.

Petitions

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

CCNI annual complaints assessment

The 3rd formal assessment was held on 26 March 2014. Recommendations and associated actions will be agreed following the forthcoming report from 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. 1611 or 65% of the total DG7 received volume were e-mails.

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 13/14.

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

Complaints about HVCA

There was 1 written complaint recorded as being related to the High Volume Call Answering system.

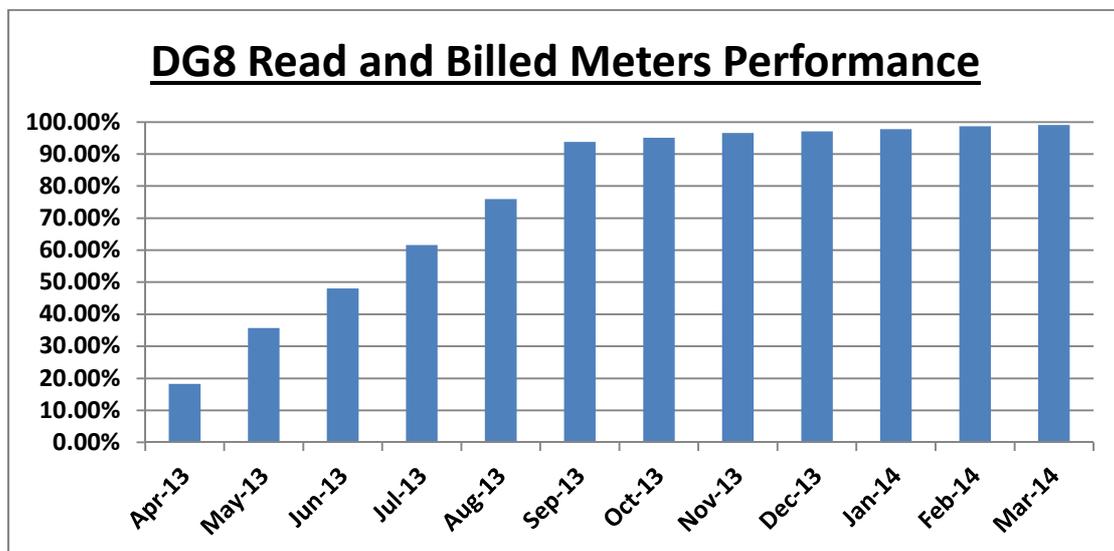
Exclusions

A total of 13 written customer complaints have been excluded from DG7 reporting during 13/14 for a variety of exclusion reasons as per the Level of Service Methodology.

Lines 6 - 12 - DG8 – Bills for metered customers

DG8 performance was 99.11% against an increased target of 98.73%. This out-turn performance was an increase of 0.38% on DG8 reads in 12/13. The increased percentage read was achieved despite an increase in the meter stock over the previous year, in conjunction with resourcing issues, as a result of competing demands to supplement data quality project work.

Graph 1: DG8 Meters Read and Billed Performance (%)



Graph 1.0 Cumulative increase in DG8 reads throughout the course of the 13/14 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, 93.76%% of the meters contributing to the DG8 target were read, against an internal company target of 90.00%.

The continuing targeted approach and skip management has resulted in an improved number of skips in 2013/14 of 3276, from 3753 in 2012/13. Further management of skips in the coming year should improve on this figure again.

In conjunction with the BAU processes, further data integrity work was undertaken that will improve the information associated with NIW's meter stock, thus improving the capacity for greater numbers and accuracy of DG8 reads, whilst further reducing the number of skips.

The Dg8 target has been increased to a challenging 99% for 14/15. This is despite the challenges of an increasing meter stock, no increase in resources and without the introduction of technology that would improve efficiency.

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 has introduced 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.

The Confidence grade of A1 has been applied for lines 6-12.

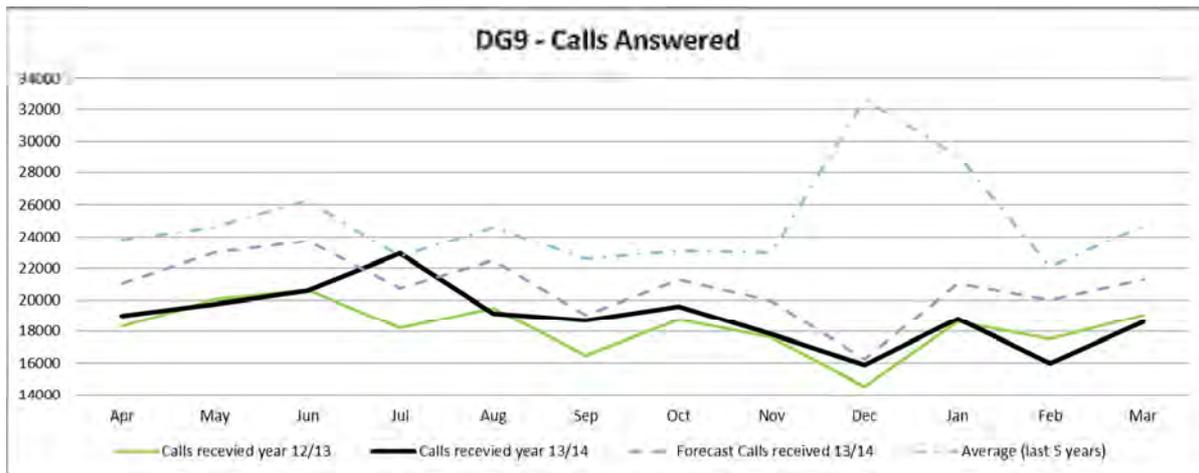
Lines 13 – 17 - DG9 Telephone Contact

DG9 Introduction

During the reporting year a total of 226,881 calls were made to the advertised Company telephone numbers. Of this a total of 223,256 were answered and 3,625 calls were abandoned.

The graph below shows a comparison against the previous year (2012/13) and against our target level of calls for the year and the 5 year average.

The small spike in calls in July was due to a no water incident in North Belfast on 29th & 30th July.



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 and this was the first full year of use. A background on HVCA is included later in this commentary.

A summary of the calls received, answered and abandoned by system is shown in the Table 1 below – greater detail is available in Annex A Table 1.

	CallMedia	HVCA	Total
Calls Received	220782	6099	226881
Calls Answered	218812	4444	223256
Calls Abandoned	1970	1655	3625

Table 1: Call Summary

All Lines Busy

There were no instances of all lines busy during the reporting period.

Calls Abandoned

3,625 calls were abandoned during the reporting year, which included calls abandoned on both CallMedia and HVCA system. The Company’s performance of 98.40% of ‘calls not abandoned’ failed to meet the 99% target set for the year.

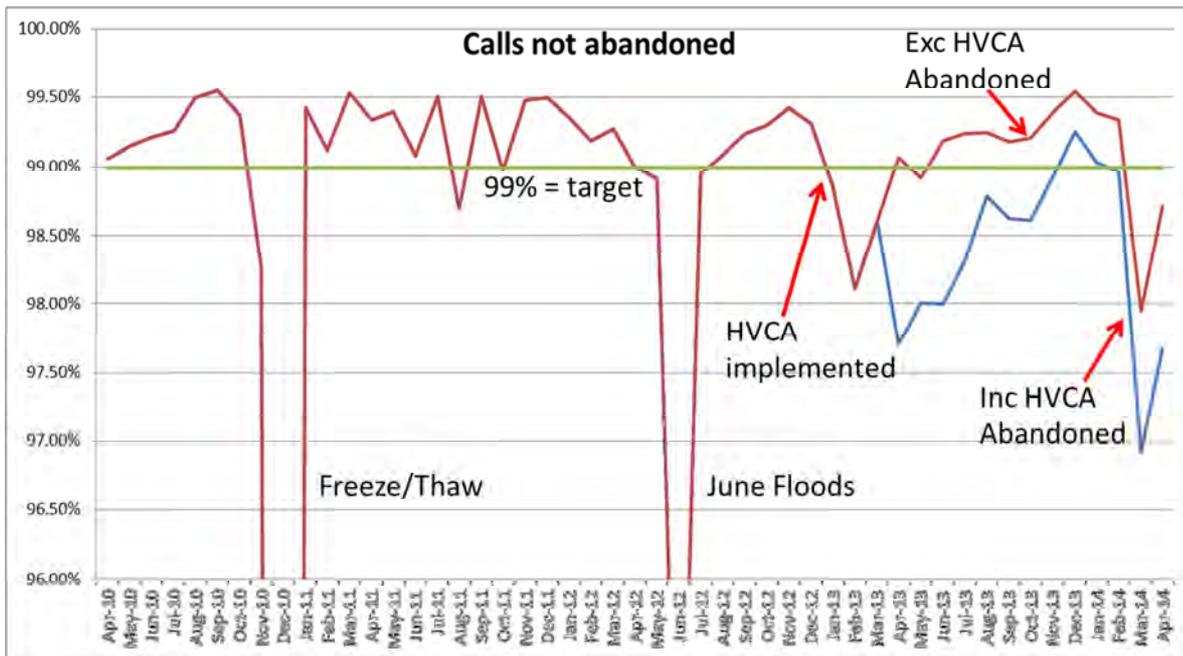
Failure of this measure is largely due to the implementation of HVCA and the associated reporting methodology.

The Company sought guidance from the Utility Regulator on how calls abandoned via HVCA should be reported, given the impact these calls were having on the performance against regulated target of 99% and recognising that consistency of approach with similar measures in E&W is key to benchmarking and comparison.

All calls handled by HVCA can be classified as either answered or abandoned using the agreed hang up location methodology. NI Water is able to classify each hang up location as ‘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 224 distinct hang up locations allowing for detailed analysis of where the customer call ended and what messages the customer was presented with.

Since implementation, it is apparent that customer behaviour was driving an increase in abandoned calls as they have historically always spoken to an agent, on being transferred to HVCA, they were more likely to hang-up and redial, in the hope of getting an agent on their repeat contact. The system operates on an agent first basis and takes overflow calls only.

This is clearly demonstrated in the graph below where, prior to the implementation of HVCA, NI Water was generally reporting over-performance on ‘% calls not abandoned’ against the target of 99%; the only exceptions to this being events such as June 2012 flooding and 2010/11 Freeze/Thaw as mentioned earlier. (Note: the upturn in the graph for November/December has been due to lower overall customer contacts resulting in less calls transferring to HVCA).



If calls handled by HVCA calls had all been reported as answered, then the Company would have recorded a performance of 99.13% for ‘calls not abandoned’ for 2013/14.

Calls Rejected

Rejected calls are calls received on advertised lines outside of published working hours, such as on the billing line after 8:00pm on a weekday. There were 1,928 (versus 2,382 in 12/13 and 4,190 in 11/12) rejected calls made outside of published working hours recorded during the 13/14 reporting period. The customer received the appropriate out of hours message.

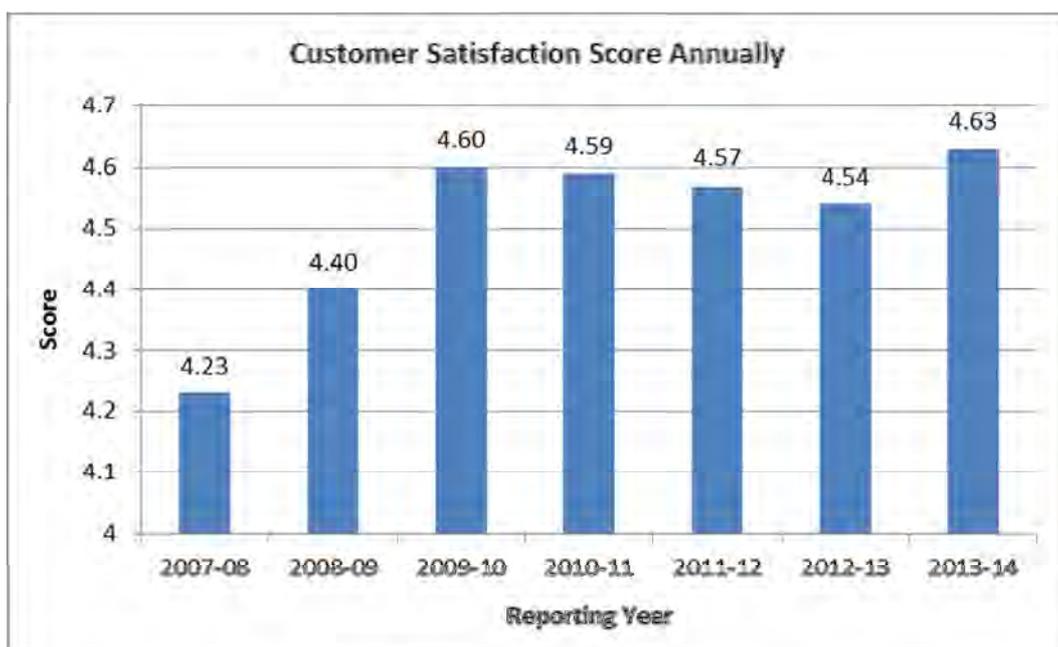
Call Handling Satisfaction

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

McCallum Layton carry out quarterly customer survey of 100 customers who have called the Company for any reason. The Company achieved an overall score of 4.63/5.0 for the reporting year, up from 4.54 in 12/13. For 2013/14, the first two quarterly surveys were undertaken concurrently due to delays in procurement which resulted in the first quarter being delayed.

The graphs below show the quarterly scores for the year and the overall average for each year since 2007/08. 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.



Sampling Methods

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.

Telephone Complaints

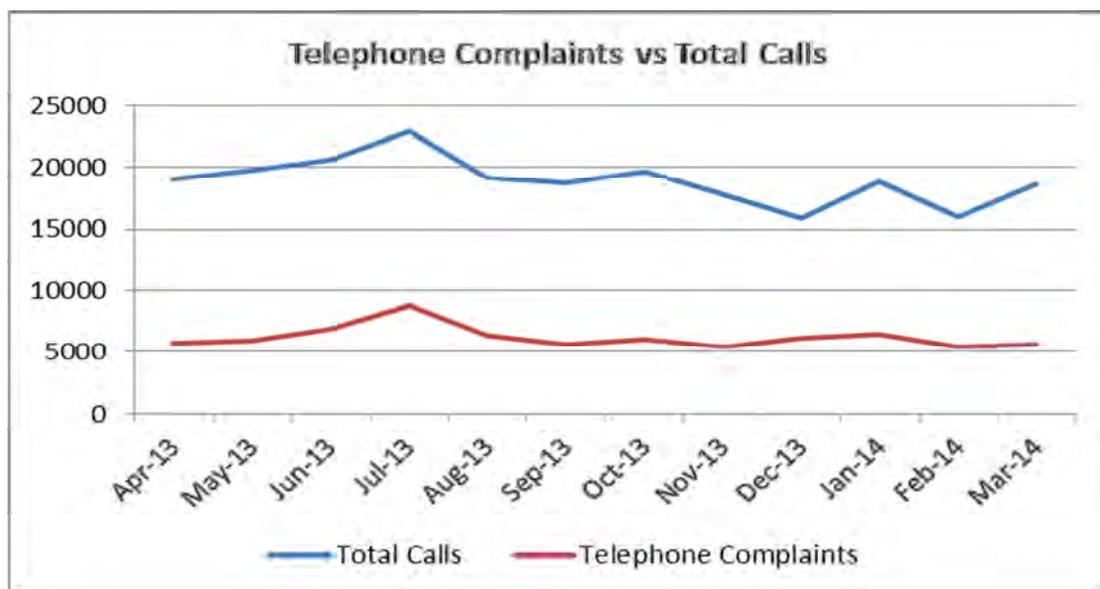
Telephone complaints cover any telephone call from a customer or a customer's representative (e.g. Citizens Advice Bureau, solicitor) alleging that an action or inaction of the Company, or a service or lack of service provided by NI Water or agent/contractor has fallen below his/her expectation.

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. dishwasher 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.

During the 13/14 reporting year NI Water reviewed the telephone complaint CMS codes for water service issues to ensure all complaints were being reported. It was identified that in some cases the complaint indicator flag was being un-selected by the CRC call handler, as they felt they had resolved the callers issue satisfactory. This misunderstanding has now been addressed by NI Water. A guidance note was issued to all CRC call handlers explaining that the complaint indicator flag was not a measure of their performance, it was required to identify telephone complaints relating to water service issues.

Telephone complaint volumes have remained reasonable static at 74,316 in 2013/14 when compared to 73,158 received during the 2012/13 reporting period.



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 380 jobs were received by the Company from FIL.

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.

Between 20 December and 7 January, there were approximately 800,000 attempted telephone contacts by customers; of which 48,000 were answered (i.e. more calls in one day than in an average year). For the five days from 27 December, the 210 lines into the Contact Centre were not enough to handle all call attempts. This 'all lines busy' situation led to a significant numbers of calls receiving engaged tones.

From a customer contact perspective, the effectiveness of incident management and quality of customer experience is restricted due to the use of call handlers, supplemented by Interactive Voice Response (IVR) to handle large call volumes to provide only 'blanket' status updates.

As a result of the above event, NI Water identified a number of performance improvement initiatives where performance could be improved and the customer communication issues avoided; this included the implementation of an HVCA system to deal with increased customer contacts during incidents, which would be limited to the 'Waterline' only. 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.

In December 2012, NI Water commissioned HVCA to ensure that the system was available for use, if required, over the Christmas/New Year period.

As part of implementation of the system, NI Water sought the views of those customers who had experienced the system. They received a call-back and asked to participate in a

short survey; feedback from these customers indicated that although have a preference for speaking to an agent; nevertheless they rated the system as being good or very good when compared to other automated systems they have experienced.

From the 5th March 2013 the HVCA system was 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.

One small issue occurred with HVCA during the reporting year whereby calls were received directly to HVCA (bypassing our Call Media system) from Wonga's auto-dialler system. Also TFCC the HVCA supplier makes a small number of test calls each month directly to the system. Both of these types of calls are identifiable on HVCA reports and we have excluded them from our DG9 reporting. Wonga have been instructed to remove our number from their auto-dialler system and we will continue to monitor this monthly.

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.

Towards the end of the reporting year, the Telephony supplier changed from Cable & Wireless to BT. This happened in March 2014 and 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 McCallum Layton.

Table 1: DG9 – Customer Contacts (2013/14)**Annex A**

	Total Yr	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Total calls received on customer contact lines	226881	19017	19736	20609	22949	19181	18708	19608	17804	15861	18803	16001	18604
Total calls received via CallMedia	220782	18013	19003	19657	22149	18831	18334	19255	17507	15682	18562	15785	18004
Total calls received via HVCA	6099	1004	733	952	800	350	374	353	297	179	241	216	600
% calls received via HVCA	2.69%	5.28%	3.71%	4.62%	3.49%	1.82%	2.00%	1.80%	1.67%	1.13%	1.28%	1.35%	3.23%
Total calls answered on customer contact lines	223256	18580	19343	20197	22561	18948	18450	19336	17612	15742	18622	15835	18030
Total calls answered via CallMedia	218812	17836	18789	19489	21974	18686	18181	19100	17399	15609	18448	15679	17622
Total calls answered via HVCA	4444	744	554	708	587	262	269	236	213	133	174	156	408
% calls answered via HVCA	1.99%	4.00%	2.86%	3.51%	2.60%	1.38%	1.46%	1.22%	1.21%	0.84%	0.93%	0.99%	2.26%
Total calls abandoned on customer contact lines	3625	437	393	412	388	233	258	272	192	119	181	166	574
Total calls abandoned via CallMedia	1970	177	214	168	175	145	153	155	108	73	114	106	382
Total calls abandoned via HVCA	1655	260	179	244	213	88	105	117	84	46	67	60	192
% calls abandoned overall	1.60%	2.30%	1.99%	2.00%	1.69%	1.21%	1.38%	1.39%	1.08%	0.75%	0.96%	1.04%	3.09%
% calls abandoned via CallMedia/Received	0.87%	0.93%	1.08%	0.82%	0.76%	0.76%	0.82%	0.79%	0.61%	0.46%	0.61%	0.66%	2.05%
% calls abandoned via HVCA /Received	0.73%	1.37%	0.91%	1.18%	0.93%	0.46%	0.56%	0.60%	0.47%	0.29%	0.36%	0.37%	1.03%
% calls abandoned via HVCA to HVCA received	27.14%	25.90%	24.42%	25.63%	26.63%	25.14%	28.07%	33.14%	28.28%	25.70%	27.80%	27.78%	32.00%

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 5A KEY OUTPUTS

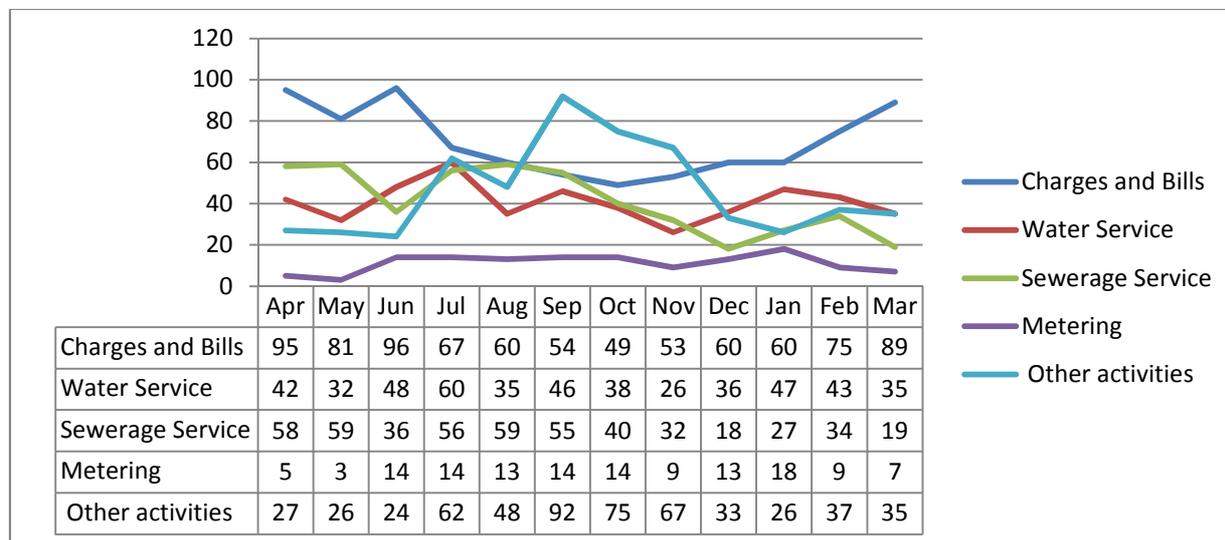
Customer complaints data for Consumer Council for Northern Ireland (TOTAL)

DESCRIPTION	UNITS	DP	1		2		3		4	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2010-11	CG	2011-12	CG	2012-13	CG	2013-14	CG
A TOTAL WRITTEN COMPLAINTS										
1 Total written complaints	nr	0	4,327	B2	2,340	B2	3,173	B2	2,505	B2
2 Number dealt with within 10 working days	nr	0	4,326	B2	2,323	B2	3,166	B2	2,498	B2
3 Number dealt with in more than 20 working days	nr	0	4	B2	0	B2	1	B2	2	B2
B CATEGORY OF WRITTEN COMPLAINTS										
(i) Charges and Bills										
4 Total written complaints about charging and billing issues	nr	0	814	B2	1,081	B2	1,567	B2	839	B2
5 Total written complaints about charging and billing issues escalated to second stage review	nr	0	n/a		221	B2	381	B2	149	B2
(ii) Water Service										
6 Total written complaints about water service issues	nr	0	2,453	B2	408	B2	448	B2	552	B2
7 Total written complaints about water service issues escalated to second stage review	nr	0	n/a		77	B2	71	B2	52	B2
(iii) Sewerage Service										
8 Total written complaints about sewerage service issues	nr	0	312	B2	329	B2	689	B2	493	B2
9 Total written complaints about sewerage service issues escalated to second stage review	nr	0	n/a		57	B2	82	B2	42	B2
(iv) Metering										
10 Total written complaints about metering issues	nr	0	39	B2	86	B2	123	B2	133	B2
11 Total written complaints about metering issues escalated to second stage review	nr	0	n/a		23	B2	25	B2	28	B2
(v) Other activities										
12 Total written complaints about other service issues or activities	nr	0	709	B2	436	B2	346	B2	488	B2
13 Total written complaints about other service issues or activities escalated to second stage review	nr	0	n/a		113	B2	82	B2	124	B2
C OTHER CUSTOMER RESPONSE MEASURES										
14 Number of holding responses issued	nr	0			n/a		695	B4	351	B4
15 Consumer Council investigations	nr	0			52	B2	27	B2	40	B2

Table 5a – Customer complaints data for Consumer Council Northern Ireland (Total)

DG7 Received Annual Profile & Explanation

The volume of DG7 complaints received each month during 13/14 by type is shown in the chart below.



Those falling into the “Charges & Bills” category remain the predominant type in total. This is in line with previous years.

There were no major operational incidents significantly impacting the volume of water service or sewerage service complaints, hence the absence of any notable spikes in either area in any given month.

There is no identifiable theme contributing to the rise in those contacts recorded as linked to “other activities” in September.

Second Stage Complaints

Systems remained in place to enable the reporting of complaints escalated to second stage review throughout 13/14.

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 13/14.

This was collated using a manually-recorded, off-system process.

The figure reported in Line 14 is the total recorded number of holding responses issued to customers during year 13/14 owing to pending investigations linked to open DG7 contacts which were received in year 13/14.

In cases where the investigations were on-going by the expiry date of the initial holding response, a further holding response will be issued.

As such, the reported figure does not represent the number of unique DG7 contacts for which one or more holding response was issued.

It does not include holding responses issued within 13/14 to DG7 contacts received in the previous reporting year.

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		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2010-11	CG	2011-12	CG	2012-13	CG	2013-14	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	10.796	A2	7.348	A2	7.972	A2	8.260	A2
30	Number of measured non households with outstanding revenue < 48 months	nr	0	17,708	A2	14,284	A2	15,348	A2	14,570	A2
31	Revenue outstanding < 3 months (measured non households)	£m	3	9.232	A2	6.179	A2	6.891	A2	7.189	A2
32	Number of measured non households with outstanding revenue < 3 months	nr	0	13,846	A2	10,951	A2	10,588	A2	10,053	A2
33	Revenue outstanding 3 - 12 months (measured non households)	£m	3	1.564	A2	1.169	A2	0.952	A2	0.928	A2
34	Number of measured non households with outstanding revenue 3 - 12 months	nr	0	3,862	A2	3,333	A2	2,925	A2	3,108	A2
35	Revenue outstanding 12 - 24 months (measured non households)	£m	3					0.012	A2	0.039	A2
36	Number of measured non households with outstanding revenue 12 - 24 months	nr	0					1,049	A2	911	A2
37	Revenue outstanding 24 - 36 months (measured non households)	£m	3					0.117	A2	0.104	A2
38	Number of measured non households with outstanding revenue 24 - 36 months	nr	0					786	A2	498	A2
39	Revenue outstanding 36 - 48 months (measured non households)	£m	3							0.000	
40	Number of measured non households with outstanding revenue 36 - 48 months	nr	0							0	
41	Revenue outstanding > 48 months (measured non households)	£m	3							0.000	
42	Number of measured non households with outstanding revenue > 48 months	nr	0							0	
D REVENUE OUTSTANDING - UNMEASURED NON HOUSEHOLDS											
43	Total revenue outstanding < 48 months (unmeasured non households)	£m	3	0.163	A2	3.083	A2	0.402	A2	2.627	A2
44	Number of unmeasured non households with outstanding revenue < 48 months	nr	0	1,304	A2	10,805	A2	1,542	A2	10,114	A2
45	Revenue outstanding <3 months (unmeasured non households)	£m	3	0.040	A2	2.812	A2	0.111	A2	2.349	A2
46	Number of unmeasured non households with outstanding revenue < 3 months	nr	0	219	A2	9,836	A2	155	A2	8,826	A2
47	Revenue outstanding 3 -12 months (unmeasured non households)	£m	3	0.123	A2	0.271	A2	0.025	A2	0.165	A2
48	Number of unmeasured non households with outstanding revenue 3 - 12 months	nr	0	1,085	A2	969	A2	256	A2	697	A2
49	Revenue outstanding 12-24 months (unmeasured non households)	£m	3					0.241	A2	0.005	A2
50	Number unmeasured non households with outstanding revenue 12 - 24 months	nr	0					894	A2	184	A2
51	Revenue outstanding 24-36 months (unmeasured non households)	£m	3					0.025	A2	0.108	A2
52	Number of unmeasured non households with outstanding revenue 24 - 36 months	nr	0					237	A2	407	A2
53	Revenue outstanding 36 -48 months (unmeasured non households)	£m	3							0.000	
54	Number of unmeasured non households with outstanding revenue 36 - 48 months	nr	0							0	
55	Revenue outstanding >48 months (unmeasured non households)	£m	3							0.000	
56	Number of unmeasured non households with outstanding revenue > 48 months	nr	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	1.534	A2	0.957	A2	1.094	A2	0.844	A2
58	Amount of revenue written off from unmeasured households	£m	3								
58a	Amount of revenue written off from unmeasured non-households	£m	3	0.070	A2	0.057	A2	0.173	A2	0.094	A2
F CUSTOMER SERVICES OPERATING EXPENDITURE											
59	General customer services operating expenditure Total	£m	3	6.667	A2	6.745	A2	6.418	A2	6.767	A2
i	Employment costs	£m	3	3.168	A2	3.862	A2	3.673	A2	3.408	A2
ii	Hired and contracted costs	£m	3	2.731	A2	3.129	A2	3.139	A2	3.392	A2
iii	Other	£m	3	1.429	A2	0.686	A2	0.611	A2	0.739	A2
iv	Adjustments	£m	3	-0.661	B3	-0.932	B3	-1.005	B3	-0.772	B3
60	Outstanding revenue collection operating expenditure (households)	£m	3	N/C							
60a	Outstanding revenue collection operating expenditure (non households)	£m	3			2.009	DX	2.118	DX	2.269	DX
61	Donations to charitable trusts assisting customers in debt (households)	£m	3	N/C							
62	Operating expenditure due to vulnerable household customers	£m	3	N/C							
63	Total customer services operating expenditure	£m	3	6.667	A2	8.754	A2	8.536	A2	9.036	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 2014 NI Water had no actual revenue from households as this is received by way of a subsidy from Department for Regional Development (“DRD”). There was £1.11m due to NIW from DRD for subsidy at 31 March 2014. 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 DRD.

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 2014.

At 31 March 2014 the closing trade debtor balance was £8.260m. Trade Debtors increased this year largely due to back-billing and increased consumption for a small number of customers.

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 £4.4m and is made up of the following:

- £0.7m for debt over 4 years
- £0.6m for debt 3 - 4 years
- £0.7m for debt 2 – 3 years
- £1.1m for debt 1 – 2 years
- £1.0m for debt 90 – 365 days
- £0.3m 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. £1.9m more than the detailed debtors listing provided by Echo. This was due to the following:

- Future system adjustments (£1.7m)
- Referred Bills (£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 2013/14 outstanding from measured non households for less than 48 months. Balance as at 31 March 2014 was £8.260m.

Row 30 – Number of Measured Non-Households with Outstanding Revenue < 48 months

The number of measured non households at the end of 2013/14, with revenue outstanding for less than 48 months. Total at 31 March 2014 was 14,570. 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 £1.9m. The £1.9m is approximately 11% of total outstanding debtors at 31 March 2014 of £17.1m. An assumption was made to apply an 11% 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 2013/14 that has been outstanding from measured non households for less than 3 months. Balance as at 31 March 2014 was £7.189m.

Row 32 – Number of Measured Non-Households with Outstanding Revenue < 3 months

The number of measured non households at end of 2013/14, with revenue outstanding for less than 3 months. As at 31 March 2014 this totalled 10,053.

Row 33 – Revenue Outstanding 3-12 months (Measured Non Households)

The total amount of revenue at the end of 2013/14 that has been outstanding from measured non households for at least 3 months but less than 12 months. Balance as at 31 March 2014 was £0.928m.

Row 34 – Number of Measured Non-Households with Outstanding Revenue 3-12 months

The number of measured non households at end of 2013/14 with revenue that has been outstanding for at least 3 months but less than 12 months. At 31 March 2014 this totalled 3,108.

Row 35 – Total Revenue Outstanding 12-24 months (Measured Non Households)

The total amount of revenue at the end of 2013/14 outstanding from measured non households for at least 12 months but less than 24 months. At 31 March 2014 this totalled £0.039m.

Row 36 – Number of Measured Non-Households with Outstanding Revenue 12-24 months

The number of measured non households at end of 2013/14 with revenue that has been outstanding for at least 12 months but less than 24 months. At 31 March 2014 this totalled 911.

Row 37 – Total Revenue Outstanding 24-36 months (Measured Non Households)

The total amount of revenue at the end of 2013/14 outstanding from measured non households for at least 24 months but less than 36 months. At 31 March 2014 this totalled £0.104m.

Row 38 – Number of Measured Non-Households with Outstanding Revenue 24-36 months

The number of measured non households at end of 2013/14 with revenue that has been outstanding for at least 24 months but less than 36 months. At 31 March 2014 this totalled 498.

Row 39 – Number of Measured Non-Households with Outstanding Revenue 36-48 months

The number of measured non households at end of 2012/13 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 2014 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 2014.

- At 31 March 2014 the closing trade debtor balance was £2.627m (31 March 2013, £0.402m). The reason for the increase is due to the 2014/15 annual billing invoices for £2.3m which were raised in March 2014 and held in the balance sheet as deferred income to be released in 2014/15.

The debtor balance reported figure is made up of unmeasured water and sewerage debtors less bad debt provision. The bad debt provision is £0.138m and is made up of the following:

- £0.022m for debt over 4 years
- £0.019m for debt 3 - 4 years
- £0.023m for debt 2 – 3 years
- £0.033 for debt 1 – 2 years
- £0.034 for debt 90 – 365 days
- £0.007m 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 2013/14 outstanding from unmeasured non households for less than 48 months. Balance at 31 March 2014 was £2.627m.

Row 44 – Numbers of Unmeasured Non-Households with Outstanding Revenue < 48 months

The number of unmeasured non households at the end of 2013/14 with revenue that has been outstanding for less than 48 months. Total at 31 March 2014 was 10,114.

Row 45 – Revenue Outstanding < 3 months - Unmeasured Non Households

The total amount of revenue at the end of 2013/14 outstanding from unmeasured non households for less than 3 months. Balance at 31 March 2014 was £2.349m.

Row 46 – Numbers of Unmeasured Non-Households with Outstanding Revenue < 3 months

The number of unmeasured non households at the end of 2013/14 with revenue outstanding for less than 3 months. Total at 31 March 2014 was 8,826.

Row 47 – Revenue Outstanding 3-12 months - Unmeasured Non Households

The total amount of revenue at the end of 2013/14 outstanding from unmeasured non households for at least 3 months but less than 12 months. Balance at 31 March 2014 was £0.165m.

Row 48 – Numbers of Unmeasured Non-Households with Outstanding Revenue 3-12 months

The number of unmeasured non households at end of 2013/14 with revenue outstanding for at least 3 months but less than 12 months. Total at 31 March 2014 was 697.

Row 49 – Revenue Outstanding 12-24 months - Unmeasured Non Households

The total amount of revenue at the end of 2013/14 outstanding from unmeasured non households for at least 12 months but less than 24 months. Balance at 31 March 2014 was £0.005m.

Row 50 – Numbers of Unmeasured Non-Households with Outstanding Revenue 12-24 months

The number of unmeasured non households at end of 2013/14 with revenue outstanding for at least 12 months but less than 24 months. Total at 31 March 2014 was 184.

Row 51 – Revenue Outstanding 24-36 months - Unmeasured Non Households

The total amount of revenue at the end of 2013/14 outstanding from unmeasured non households for at least 24 months but less than 36 months. Balance at 31 March 2014 was £0.108m.

Row 52 – Numbers of Unmeasured Non-Households with Outstanding Revenue 24-36 months

The number of unmeasured non households at end of 2013/14 with revenue outstanding for at least 24 months but less than 36 months. Total at 31 March 2014 was 407.

Row 53 – Revenue Outstanding 36-48 months - Unmeasured Non Households

The total amount of revenue at the end of 2013/14 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 2014 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 £0.939m (2012/13, £1.267m). The decrease is a result of improved income collection in 2013/14.

Authorisation of bad debt write-off

With regard to writing off bad debts the service provider has authorisation to write off only terminated accounts. No write off for ongoing debt will be made unless expressly authorised by NI Water.

Authorisation approval levels are as follows:

Delegation Limits [By Item]	Recommendation from (External service provider)	Approval required Grade (Internal)	DFP/DRD * (External)
Value			N/A
Up to £100	Agent	Billing & Collection L4.	
>£100 to £1,000	Senior Agent / Team Manager		
>£1,000 to £5,000	Service Delivery Manager		
>£5,000 to £10,000	Head of Service Delivery	Head of Billing & Collections 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 DRD 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. The strategy states that write offs will only be made on terminated accounts where the debt has been finalised.

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 2013/14 was £0.844m (2013/14, £1.094). The decrease is a result of improved income collection in 2013/14.

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 2013/14 was £0.094m (2012/13, £0.173m). The decrease is a result of improved income collection in 2013/14.

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%
Test meters	75%	75%	75%	75%	75%	75%	75%	100%	100%	100%	100%

Allocation of High, Medium and Low

The total debtors (debit balances) are reviewed on a quarterly basis, taking into account the outstanding balance and the age of the debt. The last review was carried out at the end of February 2014. The following steps were taken:

- The top 100 customers were individually reviewed;
- Large commercial entities were reviewed; e.g. [REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED]
- All public sector accounts e.g. Health Trusts, Education Boards, Schools, were reviewed;
- The agricultural customers were grouped and reviewed;
- Food processors were grouped and reviewed;
- The retail customers were grouped and reviewed;
- The hotel, bar and restaurant customers were reviewed;
- The charity, voluntary sector, housing association and church customers were grouped and reviewed;
- The construction and quarry customers were grouped and reviewed;
- Accounts with a STD VAT code were reviewed individually;
- The manufacturing customers were grouped and reviewed by name and by activity;
- The food processor customers were grouped and reviewed;
- Sports clubs were grouped and reviewed;
- Management agencies were grouped and reviewed.
-

Adopting the experienced judgement of the Billing, Revenue and Collections Lead person, customers were designated a risk of payment default as High, Medium and Low. Test meters were separately identified.

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 by setting a percentage against the original invoiced figure in the month on the basis of the adjustments in previous months. Percentages of 5% for water and 12.5% for sewerage were used. This resulted in an estimate of £1.7m of future system adjustments.

Debtors was reduced by £1.7m in March 2014 and the bad debt provision calculated on the reduced debt was decreased by £0.3m.

Bad Debt Provision Summary

The following is a summary of the bad debt provision at 31 March 2014 and 31 March 2013:

	2014	2013
	£m	£m
Measured water & sewerage	3.913	4.264
Unmeasured water & sewerage	0.138	0.166
Trade effluent	0.353	0.221
Total	4.404	4.651

Subsidy

NI Water received £260.3m subsidy in relation to household customers in 2013/14 with nothing outstanding from DRD at 31 March 2014.

NI Water received £13.72m subsidy in relation to non-household customers and at 31 March 2014 an amount of £1.11m was outstanding from DRD. The total subsidy for non-households for the year ended 31 March 2014 was £14.83m. 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 £6.767M in AIR14 is a £0.3M increase (5%) against the costs of £6.419M in AIR13. This arises for the following reasons:

- Employment costs (decrease of 0.3M (7%)).
- Hired and contracted costs (increase of 0.3M (8%)).
- Other costs (increase of 0.1M (21%)).
- Adjustments (increase of 0.2M (23%)).

None of the variances are material, as per the definition (i.e. +/- 30%).

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 a high-level estimate from Echo of the split of their monthly service charge relating to collection activity. In addition, an estimate of some internal NIW collection costs was included. There is a confidence grading of DX, as there was no formal system in place to gather these costs.

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		2		3		4		5		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		CURRENT YEAR		
			2010-11	CG	2011-12	CG	2012-13	CG	2013-14	CG	2014-15	CG	
A PROPERTIES													
1	Household properties connected during the year	000	3	4.748	B2	3.838	B2	4.154	B2	3.611	B2		
2	Non-household properties connected during the year	000	3	0.284	B2	0.329	B2	0.195	B2	0.204	B2		
B BILLING													
3	Households billed unmeasured water	000	3	663.353	C2	672.816	A2	681.095	A2	688.832	B2	694.361	B2
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	663.353	C2	672.816	A2	681.095	A2	688.832	B2	694.361	B2
7	Household properties (water supply area)	000	3	702.825	C2	713.341	A2	721.698	A2	729.182	B2	734.838	B2
8	Non-households billed unmeasured water	000	3	13.648	B3	11.943	A2	10.896	A2	10.271	A2	9.741	A2
9	Non-households billed measured water	000	3	68.713	B2	68.674	A2	69.158	A2	69.567	A2	70.186	A2
10	Non-households billed water	000	3	82.361	B3	80.617	A2	80.054	A2	79.838	A2	79.927	A2
11	Non-household properties (water supply area)	000	3	99.674	B3	93.072	A2	92.466	A2	92.286	A2	92.561	A2
12	Void properties	000	3	51.290	B3	52.981	A2	53.015	A2	52.798	B2	56.305	B2
C POPULATION													
13	Population - households billed unmeasured water	000	2	1686.41	B2	1698.55	B2	1709.66	B2	1718.73	B2		
14	Population - households billed measured water	000	2	0.00	A1	0.00	A1	0.00	A1	0.00	A1		
15	Population - non-households billed unmeasured water	000	2	8.41	B3	7.61	B3	7.11	B3	6.78	B3		
16	Population - non-households billed measured water	000	2	103.66	B3	102.66	B3	102.7	B3	102.28	B3		
17	Population - total	000	2	1798.48	B2	1808.82	B2	1819.47	B2	1827.79	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 report 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 report 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 A and B are completed by the Customer Systems team and Block C by the Leakage team.

The information in this table is used in a number of core corporate calculations such as the water balance calculation and also 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 2014/15. NI Water is subsidised for these domestic customers by Department for Regional Development (DRD).

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 DRD (domestic customers).

Classification of farms

As per Utility Regulator guidelines, farms were reclassified as billed non-households for AIR09 – this has remained for AIR14. 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 key source of information for the new connections and property data in Table 7 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 initiatives such as the data quality programme, and/or
- unmeasured non-domestic metering programme (UNHH) which refers to a specific regulatory target as set out in PC10 Appendix 19 submission.

The Data Quality programme has been considering a number of initiatives to further cleanse customer data, particularly legacy customer data (data which was inherited from DRD Water Service in April 2007) – such projects include Test Meters, Rapid-Pointer alignment, Third-party data sources (which looks to commercially available databases to provide enhanced customer and property information to deliver more robust customer and billing information), Pipe Size, Customer and Property analytical tools, etc.

We have used a number of 3rd party data sources, (the primary being the POINTER dataset) to ensure our property information is as robust and accurate as possible.

The roll-out of the metering programme has continued. Overall the number of non-domestic unmeasured properties has decreased from circa 10,500 in March 2013 to 10,000 in March 2014. This continued year on year reduction is the result of the UNHH programme, both through the installation of new meters on unmeasured non-domestic properties and the finding of existing meters on other similarly classified properties.

The basis and targets for the UNHH is set out in the PC10 submission and is a regulatory requirement through the 'unwinding' of the estimated average unmeasured consumption to a single figure by the end of PC10 period (End March 2013) for both leakage/water balance calculation and tariff setting/charging. The original estimated target was 170.61 m³/prop/year. This was to be delivered through the reclassification of 3100 properties from the unmeasured to measured category, based primarily on the installation of meters.

The UNHH consumption has been monitored throughout a 3¼ year period, commencing January 2010, with regular updates provided to NIAUR. The approach taken in order to achieve the target varied over the 3 years:-

- Year 1 – Properties targeted on a priority basis (largest consumers 1st)
- Year 2 – Properties targeted on a geographic / 'value for money' (VFM) basis, from an efficiency perspective
- Year 3 – Properties revert to original prioritisation on consumption (largest consumers 1st)

The difference between Year 1 and Year 3 is the priority order given to each Property Type. The reworking of the methodology, described, below has caused the list of top consumers to be reordered, based on the recalculated average consumption per property type. The unmeasured average is based on actual consumption for the corresponding measured property type.

The original projection had been based on 2008/09 consumption and recognised that consumption trends can vary year on year, especially given the economic and consumption downturns. During 2012, we undertook an exercise to review and reforecast the average UNHH consumption per Property Type, which would result in a more up-to-date consumption figure for the UNHH properties. This was a lengthy and complex process, as explained in a presentation to UR on 1st August 2012, based on the steps set out in Annex A.

Following the review, completed in September 2012, we forecast forward 6 months (to March 2013), based on removing a further 500 'priority' properties from the unmeasured dataset. This recalculation resulted in a slight increase to the original PC10 target

Original PC10 target estimate	170.61 m ³ /prop/yr
Revised end PC10 estimate	176.68 m ³ /prop/yr

This revised average UNHH consumption figure of 176.68 m³/prop/yr was used in the PC13 submission.

In March 2013, we re-calculated an unmeasured non-household consumption figure of 198.01 m³/prop/year, based on March 2013 actual property count but 2011/12 consumption data. This was used in AIR13 by Leakage.

In September 2013, the average UNHH consumption model was re-run to include updated consumption volumes from the 2012/13 reporting year. This indicated an average UNHH consumption of 184.09 m³/prop/year.

UR had expressed their concerns at the different estimates being provided when a single figure was expected as an outcome of the PC10 UNHH project. A presentation to the UR on 20th September 2013, set out the basis for each figure, the issue of timing & availability of information at that time and requested clarification of which figure should be used in future submissions.

- PC13 revenue allocation applies to 2013/14 and 2014/15. It used a forecast UNHH consumption of 176.68 m³/prop/yr.
- AIR13 did not use the same figure for UNHH consumption as used in the PC13 revenue allocation since AIR13 reflects estimated historical consumption as opposed to the forecast consumption. At time of compilation the best available consumption was 2011/12 data, giving an estimated average UNHH consumption of 198.01 m³/prop/yr.

Overall, the revised estimated average UNHH consumption of 184.09 m³/prop/yr, is approximately 4.5% higher than the PC13 forecast of 176 m³/prop/yr and 7.9% higher than the original PC10 forecast of 170.61m³/prop/yr.

As part of our AIR14 submission we committed to updating the average UNHH consumption with 'End March 14' UNHH property numbers and 13/14 consumption – resulting figure 186.27 m³/prop/year. This will be used in AIR14 by Leakage.

As part of PC15 we met with the Reporter to discuss the UNHH consumption calculation, methodology and progress since the start of the PC10 period. We provided answers to the following questions raised by the Reporter during a meeting on 18th March 2014.

- Could we confirm how many properties were added to the UNHH category year on year and the reasons for addition?
- Could we confirm how many properties were removed from the UNHH category year on year and the reasons for removal?
- Could we confirm which properties, from the chosen datasets, have remained unchanged during the PC10 UNHH exercise?

Under the Water & Sewerage Services (2006) Order, NI Water is required to install meters on all new household connections since April 2007. As explained above, customers are

not being charged on a measured basis, so the property is still being 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 provides us with a snapshot at the end of each month in terms of gross movements; it doesn't 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 of Enterprise, Trade and Investment (DETINI) and the Central Statistics Office (CSO), Ireland

From the Rapid Property Summary there are deemed to be 601 (gross) 'unmeasured – not charged' properties which (based on sample taken) are mostly NI Water premises as per table below.

Unmeasured - Not Charged	Count
NI Water	548
Fire Authority	13
Other	40
Total	601

NI Water is currently investigating any 'unmeasured – not charged' properties outside of NI Water ownership.

Test meters

In response to the following AIR13 Reporter's Recommendation:-

"NI Water should work further towards fully implementing the outcomes of the Test Meter project within their property estimates."

The remaining test/retain for review meters have been raised with relevant Heads of Function (Metering and Billing & Revenue) to confirm what is being planned in this area. Where test meters couldn't be resolved under the project, they were categorised as below. Meter readings were to be reviewed over a period of time to help determine the correct status of these test meters.

Retain for Review Breakdown	Count
Retain for Review	1353
RFR-Compensation Supply Query	20
RFR-No Billable Name/Add	84
RFR-Shared Supply	105
RFR-Unable to Locate	443
Test Meter	2
Total	2007

Under the Test Meter project, those that were found to be non-domestic billable were attributed to the non-domestic measured category and billed retrospectively to April 2007.

A contrasting approach has been adopted for the treatment of 'test' meters for household and non-household properties, whereby 'test' meter numbers have been included in household property numbers but excluded from non-household numbers.

As per last year, no allowance is being made for non-domestic test meter numbers until their status is confirmed and uploaded onto Rapid. As discussed with the Reporter in November 2009, these test meters have not been added to the unmeasured base being deemed to be water taken legally unbilled.

The Reporter queried the logic of this assumption and was advised that the non household 'test' meters have not been included as the status of these accounts is still uncertain and further work to ascertain whether these are actually 'billable' properties, needs to be undertaken. You could argue that by adopting this approach, NIW is understating the number of billable non-household properties included in the tariff model, as it would be reasonable to assume that a number of the test meters will prove to be billable non-household properties.

However, the Reporter believes that NI Water has adopted a prudent approach, and as we work to fully verify each test meter it is possible that the number of test meters assigned to the measured non-household customers could reasonably be expected to increase over time as the status of more accounts of this nature are assessed and verified.

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 properties are not double counted, they are not included in Table 7 non-domestic property counts (although NIW still retain this information for customer record and charging purposes). However, there are 588 domestic properties classified as site meters and there will be further investigation and analysis to be completed during 2014/15 to ensure these are classified correctly.

Overall, the number of non-domestic site meters has increased by 200 during 2013/14, driven primarily as a result of extended non-domestic charging.

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 property numbers have evolved over the reporting year.

Property Numbers	March 13	March 14
	Actual	Actual
Start of Year	676970	685219
New/Metered (plus)	(+) 4154	(+) 3611
Data Cleanse/BAU Activity	(+) 5362	(+) 3357
Test Meters	(-) 537	(-) 7
Site Meters	(+) 31	(+) 10
Voids	(-) 761	(+) 254
End	685219	692444

Property Numbers	1 st April 2013	1 st Dec 2013	1 st Apr 2014
Unmeasured Water Gross Household (L7 year end sub calc)	725442	730900	732921
Unmeasured Water Occupied Household (L3 year end sub calc)	685219	690611	692444
Unmeasured Water Voids Non-Household	40223	40289	40477

Household Voids	Voids	Difference (in-year)
March 2014	40477	(+) 254
March 2013	40223	(-) 761
March 2012	40984	

In the table above, the figure of 3357 for data cleanse / BAU activity can be explained as follows;

- 1) New Connections during the 2013/14 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:
 - a) The adding of properties NI Water allegedly didn't know about (This is the gap the Rapid-POINTER Phase 3 project demonstrated and Phase 4 aims to close out).
 - b) 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.

NI Water recognises there is an anomaly in terms of property numbers (between our 'Customer Contacts and Billing Database' and 'POINTER') – The Rapid-POINTER Phase 3 project has completed a pilot study and Phase 4 will aim to address this issue across Northern Ireland. NI Water hasn't had an update from LPS in terms of domestic data since 2007 – Our only form of update has been through customer contact. We recognise there is a need to review the process for both the creating and the demolishing of a property. This will be taken forward as part of our Data Quality work. As part of this work, we are also carrying out analysis and review of both water and sewerage status particularly in terms of data primacy.

Measured household property movement

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	1st April 2013	1st Dec 2013	1st Apr 2014
Unmeasured Water Gross Non-Household	18265	17791	17692
Unmeasured Water Occupied Non-Household (L8 year end sub calc)	10525	9964	10016
Unmeasured Water Voids Non-Household	7740	7827	7676

Measured non-household property movement

Property Numbers	1st April 2013	1st Dec 2013	1st Apr 2014
Measured Water Gross Non-Household	74253	74345	74361
Measured Water Occupied Non-Household (L9 year end sub calc)	69456	69616	69678
Measured Water Voids Non-Household	4797	4729	4683

Non household voids

Non-Household Voids	Voids	Difference (in-year)
March 2014	12359	(-) 178
March 2013	12537	(+) 251
March 2012	12286	

Additional information

As Table 7 is based on averages, please find summary table below for 1st April 2013, 1st December 2013 and 1st April 2014.

Property Numbers	1st Apr 2013	1st Dec 2013	1st Apr 2014
Unmeasured Water Household	685219	690611	692444
Unmeasured Water Non-Household	10525	9964	10016
Measured Water Non-Household	69456	69616	69678
Voids	52760	52845	52836

Annex B details the Line Methodology followed for each of the figures calculated in Table 7.

Confidence grades

We have kept the confidence grades consistent with those of AIR13. 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 similar. The automated tool (developed during AIR12) to populate the base property tables has remained in place for AIR14.

Lines 13 – 17 - Population

The population data used by NIW has been derived from 2012 based Population Projections obtained from NISRA (Northern Ireland Statistics & Research Agency) website at <http://www.nisra.gov.uk/archive/demography/population/projections/wni12cc.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.

The population for unconnected properties has been calculated from two sources:

The gross number of unconnected household properties is provided by Customer Services. The unconnected occupancy is sourced from the NIHE Housing Condition Survey 2009 (statistical annex – Table 5.7)

http://www.nihe.gov.uk/2009_northern_ireland_house_condition_survey_statistical_annex.pdf.

The number of unconnected properties is 8,000 and an occupancy rate is calculated at 0.866 (rounded) to determine a total population for unconnected properties of 6,925. The total supplied population for all connected properties is calculated as 1,827.79 (x1000). (Line 17).

Non-household population has been calculated by adding the population in communal residence

http://www.nisra.gov.uk/archive/demography/population/household/NI08_House_Projs.pdf#6

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 http://www.nisra.gov.uk/archive/demography/population/household/NI08_House_Projs.pdf#6.

(Note: As of start of May 2014, NISRA have not yet made available an update to the 2008 household projection data.)

The communal population for 2013/14 is 32,042 compared to 31,570 as used in AIR13. The farm population is $31,310 \times 2.46 = 77,021$. Therefore the non-household population is 109.09 (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 1,718.73 (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 (77,021) has been classed as measured. The communal population (32,042) is split based on 10,271 unmeasured customers (21.2%) and 38,257 measured customers which excludes farms (78.8%). This therefore provides a population for measured NHH of 102.28 (x1000) (Line 16) and an unmeasured NHH population of 6.78 (x1000) (Line 15).

Line 17 is calculated by summing Line 13 + Line 14 + Line 15 + Line 16. This gives a figure of 1,827.79 (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 – Rebaselining and recalculation of average estimated consumption

Step 1 – Update base information with revised UNHH property numbers

- As properties have moved out of the unmeasured non-domestic category (due to metering activity, data cleanse, etc.) from the start of the project, this has reduced the number of unmeasured properties which has been input to the UNHH calculation to reflect a revised total average unmeasured consumption.
- All other assumptions and individual property type averages remained unchanged.
- The change in properties and associated drop in consumption has been reported regularly to EC/UR to update them on progress.

Step 2 – Recalculate estimated average consumption

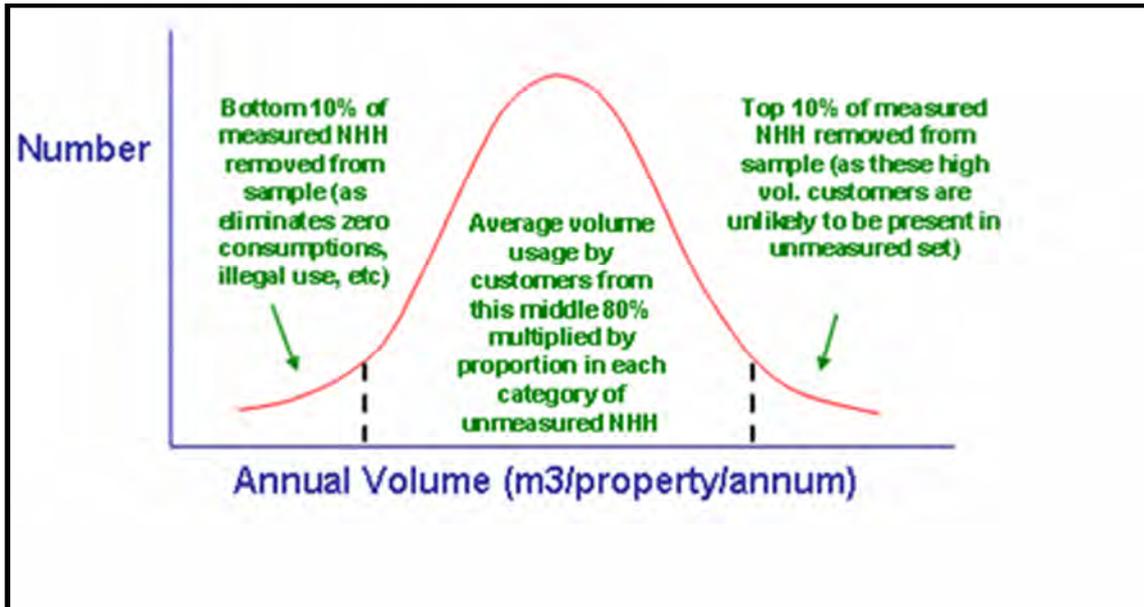
- As stated in step 1, the consumption had remained unchanged since the original calculation in 2008/09.
- During this time, measured consumption has reduced and therefore we need to consider this reduction in the UNHH individual property type and overall average calculations.
- We used March 2012 measured consumption data for our new consumption baseline and agreed to update yearly thereafter.
- For AIR14, the model will be updated with the 13/14 consumption data to enable calculate of an up-to-date average UNHH consumption.

Step 3 – Align property types with meter industry codes

- During our analysis of the various data components, we identified a number of property type/meter industry code mismatches, such as cattle troughs linked to funeral parlours, farm outbuildings to air and sea terminals, hairdressers linked to primary schools, etc.
- Given the work already on-going in the previous steps and to ensure that the overall average was an accurate representation of the dataset, we restructured the underlying data (proptype-meterindcode) through a desktop exercise.
- This restructured data has been added to the list of projects being taken forward through the reconvened Data Integrity Group/Customer Services Data Quality programme, which will ultimately see this restructure applied to Rapid.

Step 4 – Review original assumptions – 80/20 profile by meter industry code

- So far we've considered the property numbers, consumption and alignment of property types. To complete the re-baselining exercise we needed to review the original assumptions to confirm that they were still valid.
- PC10 Appendix 19.1 used 80/20 methodology to calculate the consumption per property type – see following diagram. This basically looked at the measured consumption per meter industry code, with the top and bottom 10% of the consumption removed and the average based on the middle 80%, as per diagram below (taken from Appx 19.1).
- Our analysis confirmed that zero consumption meters were also included in these datasets, skewing the figures, and should be removed before the 80% TRIMMEAN function was applied.



Annex B – Line methodology for Table 7**Line 1 - Household properties connected during the year**

These are the number of new household (domestic) properties added within the area of supply during the reporting year (previously not connected for water supply).

It is based on reconciled New Connections information extracted directly from Rapid (via CorVu), with an applied series of filters to identify New Connections as. It is NIW policy to install meters on all New Connections.

Household properties connected during the year	3611
-------------------------------------------------------	-------------

Line 2 - Non-household properties connected during the year

These are 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).

It is based on reconciled New Connections information extracted directly from Rapid (via CorVu), with an applied series of filters to identify New Connections. It is NIW policy to install meters on all New Connections.

Non-Household properties connected during the year	204
-----------------------------------------------------------	------------

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 AIR14 (dated 31st March 2014).

Households Billed Unmeasured Water	End March 2013	End March 2014
Household - Unmeasured	657,667	660,415
Household - Measured – Not Charged (test meters)	397	390
Household - Measured	26,664	31,139
Household - Site Meters	490	500
Unmeasured - Not Charged	1	0
Total	685,219	692,444
Average (Apr13/Apr14)	688,832	

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 2013	End March 2014
	0	0
Average Apr 13/Apr14	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 2013	End March 2014
	0	0
Average (Apr13/Apr14)	0	

Line 6 - Households billed water

Average number of households billed for water within the water supply area.

Calculated by adding AIR14 Table 7 lines 3, 4 and 5

Households Billed Water	Average 13/14
Households billed unmeasured water (Line 3)	688,832
Households billed measured water (external meter) (Line 4)	0
Households billed measured water (not external meter) (Line 5)	0
Total	688,832

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 AIR14 (dated 31st March 2014).

Household Properties (Water Supply Area)	End March 2013	End March 2014
Unmeasured	694,060	696,928
Measured – Not Charged (Test)	402	397
Measured	30,400	35,008
Site Meters	579	588
Unmeasured - Not Charged	1	0
Total	725,442	732,921
Average (Apr13/Apr14)	729,182	

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 2013 and End March 2014 non-domestic unmeasured properties.

Non-Households Billed Unmeasured Water	End March 2013	End March 2014
	10,525	10,016
Average (Apr13/Apr14)	10,271	

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 2013 and End March 2014 non-domestic measured properties.

Non-Households Billed Measured Water	End March 2013	End March 2014
	69,456	69,678
Average (Apr13/Apr14)	69,567	

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. The figure is calculated from the Rapid Property Summary for AIR14, excluding voids. (The sum of AIR14 Table 7 lines 8 & 9).

Non-Households Billed Water	Average 13/14
Non-Households Billed Unmeasured Water (Line 8)	10,271
Non-Households Billed Measured Water (Line 9)	69,567
Total	79,838

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 2013	End March 2014
Unmeasured	18,265	17,692
Measured	74,253	74,361
Total	92,518	92,053
Average (Apr13/Apr14)	92,286	

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 2013	End March 2014
Non-Household - Unmeasured	7740	7676
Non-Household - Measured	4797	4683
Household - Unmeasured	36,393	36,513
Household - Measured	3736	3869
Household – Measured - Not Charged (Test)	5	7
Household – Site Meters	89	88
Total	52,760	52,836
Average	52,798	

NORTHERN IRELAND WATER LIMITED -ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 8 NON FINANCIAL MEASURES
WATER METERING (TOTAL)**

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2010-11	CG	2011-12	CG	2012-13	CG	2013-14	CG	
A HOUSEHOLD METER INSTALLATION											
1	Selective meters - installed	nr	0	4,427	B2	3,458	B2	3,078	B3	3,030	B3
2	Meter optants installed	nr	0	0	A1	0	A1	0	A1	0	A1
3	Meters installed - external meter with existing or new boundary box	nr	0	4,427	B2	3,458	B2	3,078	B3	3,031	B3
4	Meters installed - external meter without boundary box	nr	0	0	A1	0	A1	0	A1	0	A1
5	Meters installed - internal meter	nr	0	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
B NON HOUSEHOLD METER INSTALLATION											
7	Selective meters - installed	nr	0	1,071	B2	747	B2	692	B2	458	B2
7a	Number of non household meters renewed	nr	0	5,809	B2	6,722	B2	4,653	B2	6,772	B2
8	Meter optants installed	nr	0	40	B2	67	B2	45	B2	23	B2
9	Meters installed - external meter with existing or new boundary box	nr	0	779	B2	578	B2	638	B2	396	B2
10	Meters installed - external meter without boundary box	nr	0	28	B2	35	B2	17	B2	22	B2
11	Meters installed - internal meter	nr	0	304	B2	201	B2	82	B2	62	B2
12	No. of meter installation requests outstanding for greater than three months	nr	0	27	B3	23	B2	10	B2	8	B2
C WATER DEMAND AT RECENTLY METERED NON-HOUSEHOLD PROPERTIES											
13	Average water billed - selective metered properties	l/prop/d	2	223.78	B3	625.61	B3	363.53	B3	520.74	B3

Table 8 – Non Financial Measures – Water Metering**Water Metering Activities****Lines 1-6 - Household meter installation**

NIW installs meters on newly connected domestic properties as per the obligation associated with Article 81 of The Water and Sewerage Services (Northern Ireland) Order 2006. The company does not install meters in 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 does 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

NIW seeks to selectively meter all newly connected domestic properties in accordance with Article 81 of the 2006 Order. A total of 3031 water meters were installed at new domestic properties during the reporting period.

During the year NIW instigated the issuing of new connection meter installations in batches, this commenced in July of 2013. From July 2013 to March 2014 NIW issued 28 batches of work equating to 3093 domestic meter installation instructions. From the 28 batches 2619 meters were installed successfully and 474 were classed as No Meter Fits (NMF's).

Prior to the issue of batches and between April and July 2013 NIW's metering contractor attempted to fit 603 domestic meters, 412 were installed successfully and 191 were classed as NMF's.

In total NIW attempted to fit 3696 domestic meters resulting in 3031 successful installations and 665 NMF's.

The vast majority of NMF's are attributable to boundary boxes being damaged or altered on development sites, rendering meter installations impossible or to an extent that had a meter been installed it would not have been in a workmanlike manner. NIW is considering a process whereby damaged boundary boxes are replaced and the customer/developer charged for the cost of the replacement box and installation. NIW is reviewing the 665 NMF's observed in 2013/14 with an aspiration to meter as many of these as possible albeit in 2014/15.

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 3031 water meters were installed in existing boundary boxes at new domestic properties during the reporting period.

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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 form part of the Unmeasured Non Household (UNHH) metering programme. The UNHH programme is as per the company response set out in Appendix 19 to the draft determination response where a commitment was made to proactively change 500 unmeasured customers to measured status per reporting year. In year the NIW metering contractor carried out 2799 premises surveys which resulted in 247 meter installs. In the case of 2552 surveys meters could not be fitted, the most common reason was due to shared supplies (35%) followed by existing meter discoveries (13%), refused access (10%), void premises (6%), incorrect property classification (4%), access problems (8%), engineering difficulties (8%) and other (16%). Other can include shallow supply, no external or internal stopcock or partial supply. The total selective meter installs for the year was 458 which includes 247 UNHH properties changed from unmeasured to measured status. The additional 211 selective meters installations were as a result of the metering of 23 large and 124 small diameter non-domestic connections and 64 other installations performed by metering section staff.

Line 7a - Number of non-household meters renewed

NIW has a reactive meter maintenance section within the metering team and reactively replaces meters and street furniture associated with meters. The maintenance activities are driven by reports generated by the meter readers and meter query technicians. 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 metering team and any meter exchanges are notified to the individual who requested the job, the CRC (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 3098 meters through the MMR process.

NIW also has a Proactive Meter Exchange (PME) programme which is designed to target approximately 1500-2000 small diameter meters each year. The meters selected for exchange are those deemed to be 17 years or more. With legacy data and data quality issues the company is targeting those meters installed prior to 1998 and where possible those meters with a whole life consumption reading >8000m³. During the reporting year NIW exchanged 2006 meters under the PME programme.

An additional 769 meters were replaced through an Engineering and Procurement contract for water mains rehabilitation as well as 899 meters directly replaced by meters readers in the course of their daily reading activities.

The total number of meters replaced by NIW in the reporting year combining all of the above work streams was 6772 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 Relations Centre (CRC). In essence 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 external meters 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 23.

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 which include the Unmeasured Non Household (UNHH) programme, 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 valve/stop tap. 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 396.

Line 10 - Meters installed – external meter without boundary box

NI Water Developer Services Co-ordination Team (DSCT) is responsible for coordinating new non-domestic water connections and meter installations >32mm diameter, as opposed to metering section who meter connections <32mm diameter. These large connections by the nature of their size require a chamber constructed to facilitate the meter and valves installations, these totalled 23 in the reporting year.

Line 11- Meters installed – internal meters

NI Water's preference is to install external meters when and where 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 UNHH, selectives and optants metering programmes. The total number of internal non-domestic meter installations completed this reporting year was 62.

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 8.

Non household meter installations

The total number of meters fitted at non households is made up of selective and optants installations. From the reported figures in Table 8 and above this equates to the summation of lines 7 and 8 which totals 481 installations. This total is the made up by combining lines 9, 10 and 11 in Table 8 and above. The meter locations reported across the selective and optant categories can be split as 62 internal and 419 external installations.

Line 13 – Average Water Billed - Selective Metered Properties

The methodology for this line is consistent with that used for AIR13. Meters uploaded to Rapid during the previous reporting year (2012/13) are the focus with the consumption based on the usage throughout the 2013/14 reporting year.

The Trimmean function was applied to the consumption to ensure the result was a true average. There were some very high and very low consumptions which would have skewed the results.

The figure reported for Line 13 is **520.74 l/prop/day**, an increase of 157.21 l/prop/day from AIR13. To demonstrate the range of consumption for AIR13 and AIR14, please see table below:

Consumption Band (m ³)	AIR13	AIR14
1-1000	843	707
> 1000	64	88
Total (excl. zeros)	907	795

The embedded document below details the meter industry codes of the meters included in this calculation. This will help to explain/justify the increase in the l/prop/day volume.



AIR13_AIR14
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		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2010-11	CG	2011-12	CG	2012-13	CG	2013-14	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	MI/d	3	0.000	A1	0.000	A1	23.100	A2	3.654	A2
7	Conditioning water supplies to reduce plumbosolvency	MI/d	3	623.693	A2	601.801	A2	563.648	A2	562.851	A2
8	Reducing the risk from Cryptosporidium	MI/d	3	0.000	A1	0.000	A1	0.000	A1	0.000	A1
9	Other	MI/d	3	48.202	A2	26.802	A2	22.952	A2	0.000	A1

Table 9 – Water Quality

Background – Year on Year

The perceived quality of water supplied by NI Water to customers has improved between 2012 and 2013:

- Mean Zonal Compliance has increased slightly from 99.80% in 2012 to 99.85% in 2013 (figure assessed by NI Water - waiting for confirmation from DWI).
 - The small increase in water quality is due in part to significantly fewer iron exceedances in 2013 (36) compared to 2012 (47).
 - In addition to this decrease in iron exceedances, there was a reduction in the number of individual pesticide exceedances – mainly for MCPA. These decreased from 13 pesticide exceedances in 2012 to 3 in 2013.
- The Operational Performance Index (for NI Water based on turbidity, iron and manganese as agreed with DWI) increased from 98.96% in 2012 to 99.30% in 2013 (NIW assessment on Turbidity, Iron and Manganese). As indicated above, this was largely due to the decreased numbers of iron exceedances.
- The percentage compliance measured at Water Treatment Works (WTWs) decreased slightly from 99.98% in 2012 to 99.93% in 2013.
- The percentage compliance measured at Service Reservoir (SR) increased from 99.90% in 2012 to 99.91% in 2013.
- Overall out of 208,867 measurements (directive standards, national standards, indicator parameters and additional monitoring requirements) made at customer tap, WTWs, SRs and Authorised Supply Points, 99.91% met the standards.

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 2013 some zonal boundaries were moved to more closely match leakage operational boundaries.

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, no WTWs were removed from service.

During 2010 - 2013 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	MI/d Raw Water Deterioration	Comment
Ballinrees	29.97	Enhanced sampling programme
Belleek	1.66	Enhanced sampling programme
Carran Hill	5.88	Enhanced sampling programme
Derg	14.03	Enhanced sampling programme
Dorisland	28.06	Enhanced sampling programme
Killyhevin	23.47	Enhanced sampling programme
Seagahan	9.76	Enhanced sampling programme
Total	112.83	

DWI is content with the above enhanced programme 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” and “Provisional Enforcement Orders”) are now the methodology by which NIW is regulated by DWI.

During 2013 the existing CPEO for Dorisland WTW (CPEO/12/01) was closed, and a new PEO was issued (PEO/13/01) due to pesticide exceedances requiring the installation of GAC at the site. This PEO was also closed during 2013 and as such has not been included in the calculation.

During 2013 one CPEO for Clay Lake WTW (CPEO/13/03) was issued due to pesticide exceedances requiring the installation of GAC at the site. Including this site, the volume for Raw Water deterioration is therefore 3.65 MI/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 2013 were reduced with most however remaining at the same levels.

Site Name	Average Dosed Water (ML/d)
Altnahinch	8.33
Ballinrees	29.97
Belleek	1.66
Camlough	3.30
Carmony	17.31
Carran Hill	5.88
Castor Bay	79.66
Caugh Hill	14.96
Clay Lake	3.65
Derg	14.03
Dorisland	28.06

Site Name	Average Dosed Water (ML/d)
Drumaroad	111.35
Dungonnell	7.59
Dunore Point	89.16
Fofanny	36.29
Forked Bridge	19.88
Glenhordial	3.96
Killyhevlin	23.47
Killylane	11.63
Lough Bradan	6.75
Lough Fea	10.97
Lough Macrory	10.54
Moyola	14.68
Seagahan	9.76
Total:	562.85

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 MI/d.

Line 9 – Other

There were no other Distribution Inputs affected by other legal requirements not mentioned in lines 6 – 8.

Confidence Grades

Confidence grades used in returns are based on OFWAT guidance documentation.

Appendix - Line 9

CPEO	Issue Date	Location	Parameter	Date Closed
CPEO/12/01	22/06/2012	Dorisland WTW	Contravention of Regulatory Standard for the parameter MCPA (0.1 mg/l)	2013
CPEO/12/02	18/07/2012	Caugh Hill WTW	Contravention of Regulatory Standard for aluminium, iron, hydrogen ion (pH), Trihalomethanes (THMs), and turbidity parameters	2013
CPEO/12/03	18/12/2012	Lough Bradan WTW and Supply Area	Contravention of Regulatory Standard for Trihalomethanes (THMs)	2013

CPEO	Issue Date	Location	Parameter	Date Closed
CPEO/13/03	29/08/2013	Clay Lake WTW	Contravention of Regulatory Standard for the parameter MCPA (0.1 mg/l)	

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) AIR14 Reporting Requirements and Definitions document March 2014. 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.

The reduction in reported leakage for 2013/14 of 3.44 MI/d demonstrates the sustained progress that has been made throughout the PC10 period and into the first year of the PC13 period following the implementation of the Water Balance Action plan. The reported leakage figure of 167.21 MI/d is 1.79 MI/d below the 2013/14 annual target of 169 MI/d.

As highlighted in the AIR13 commentary and noted by the Utility Regulator in the PC13 Final Determination, NI Water have rebased reported leakage at the end of the PC10 period from 161.75 MI/d to the initial reported leakage at the start of the PC13 period of 170.73 MI/d. This was primarily due to the transition from TDMS to Netbase as the Company’s leakage reporting software tool and the change in methodology to the UKWIR 20th Percentile calculation of Bottom Up leakage therefore adopting industry best practice.

Distribution input

There has been a marginal increase in the distribution input of 0.53% from a pre MLE value of 559.41 MI/d in AIR13 to 562.40 MI/d in AIR14.

The graph in Fig 1 below highlights the monthly change in distribution input from AIR13 to AIR14 and indicates a hotter summer season with increased household consumption followed by a milder winter season with reduced outbreak of leakage.

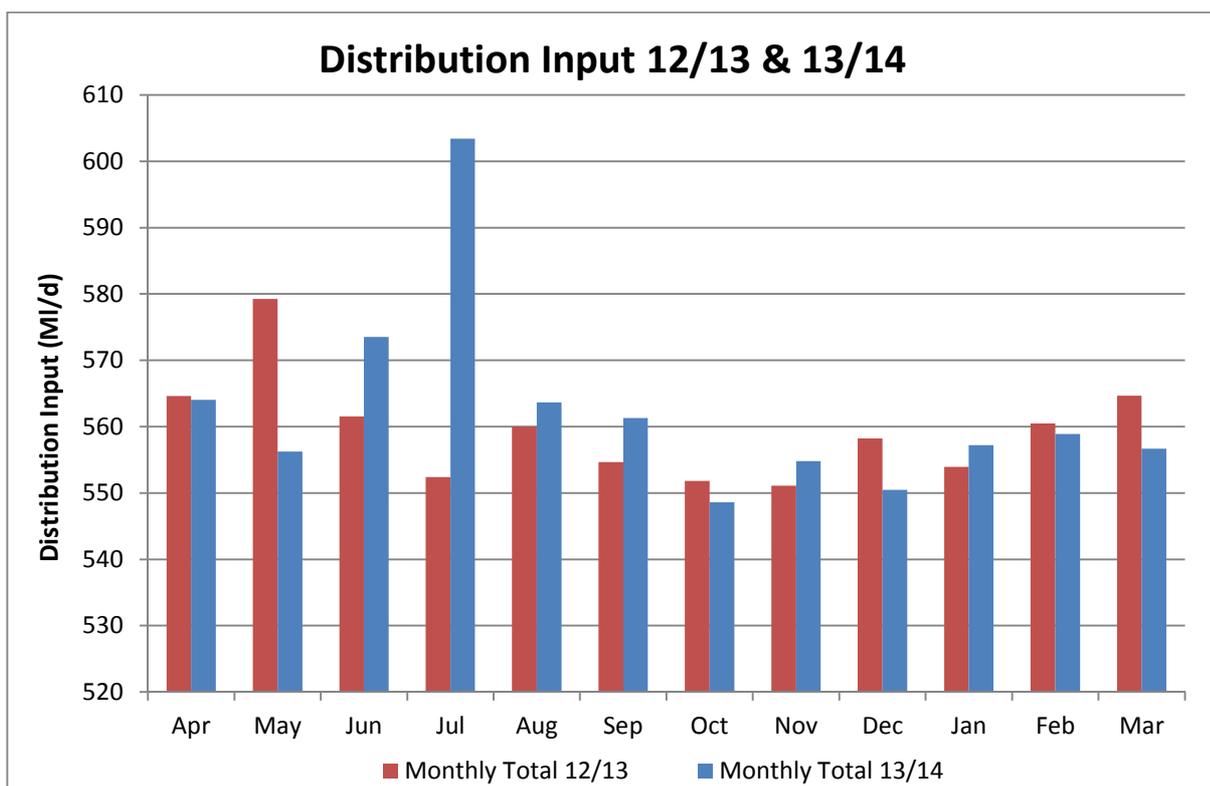


Fig 1

Unmeasured household usage and measured non-household

Similar in nature to the “Don’t Wait, Insulate” and the “Winterproof your Home” campaigns of 2011/12 and 2012/13, NI Water pursued a media campaign based on the message, “Beat the Freeze”, during the winter of 2013/14. Television, radio, newspapers and leaflet drops were utilised to reinforce the need for customer awareness in protecting both their property and minimising losses from the private side of the network.

Leakage Services have continued with the practice of maintaining current household information by surveying in the region of 20% of the properties located within the housing monitoring sites annually. This ensures that the occupancy rates of inhabited properties within the sites are as accurate as possible. During AIR14 a total of 992 properties were visited which equates to 20.2% of the PCC monitoring stock. Alongside this, 15 PCC meters were replaced to assist in maintaining accurate flow measurement. To conclude there has been a reduction in the calculated Per Capita Consumption with a figure of 149.98 l/head/d recorded for AIR13 in comparison to 145.82 l/head/d for AIR14. This translates to a reduction of 2.8%.

Following significant snowfalls in late March 2013, the weather patterns for April and May 2013 were similar to those in 2012. In June there was a noted increase in temperature were average temperatures rose and rainfall decreased for a sustained period of time lasting to the end of July 2013. The 2013/14 winter period indicates mild, but wet, weather in comparison to a drier 2012/13 winter. This is substantiated by the graphs below in Fig 2 and 3 which give a comparison of the AIR13 and AIR14 weather with the security of supply ‘normal’ year in 2003/04.

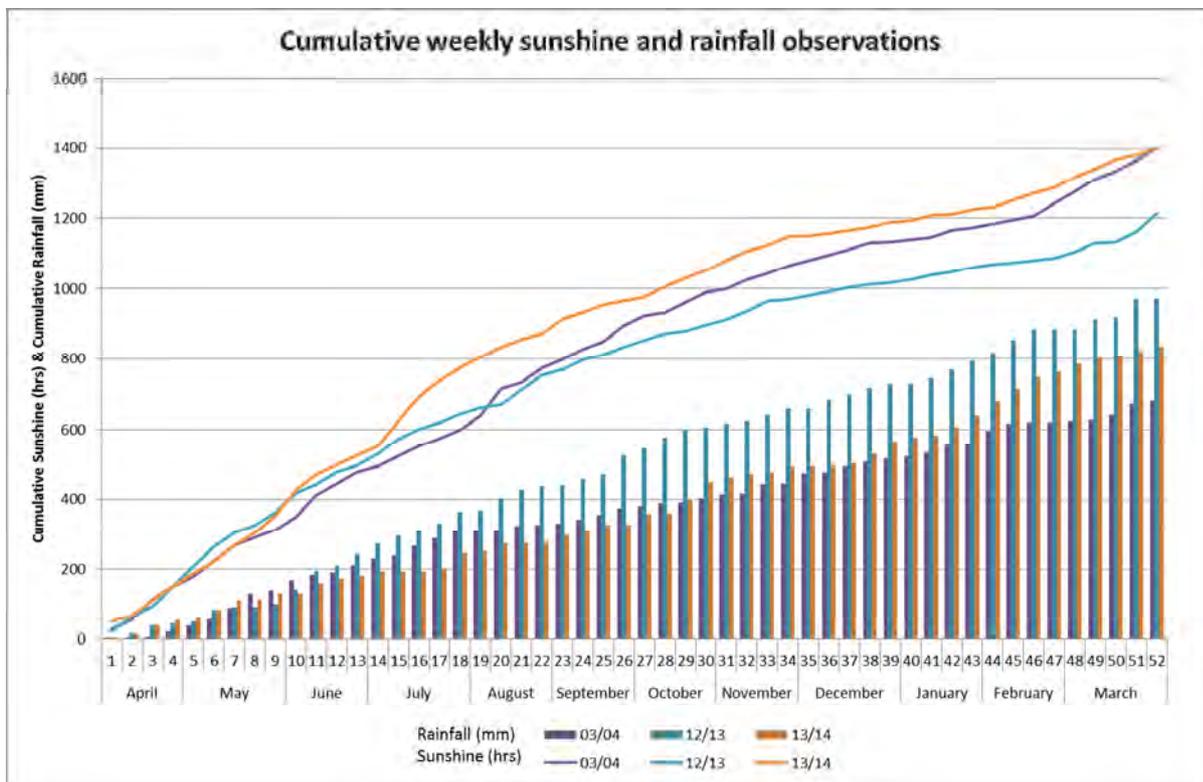


Fig 2

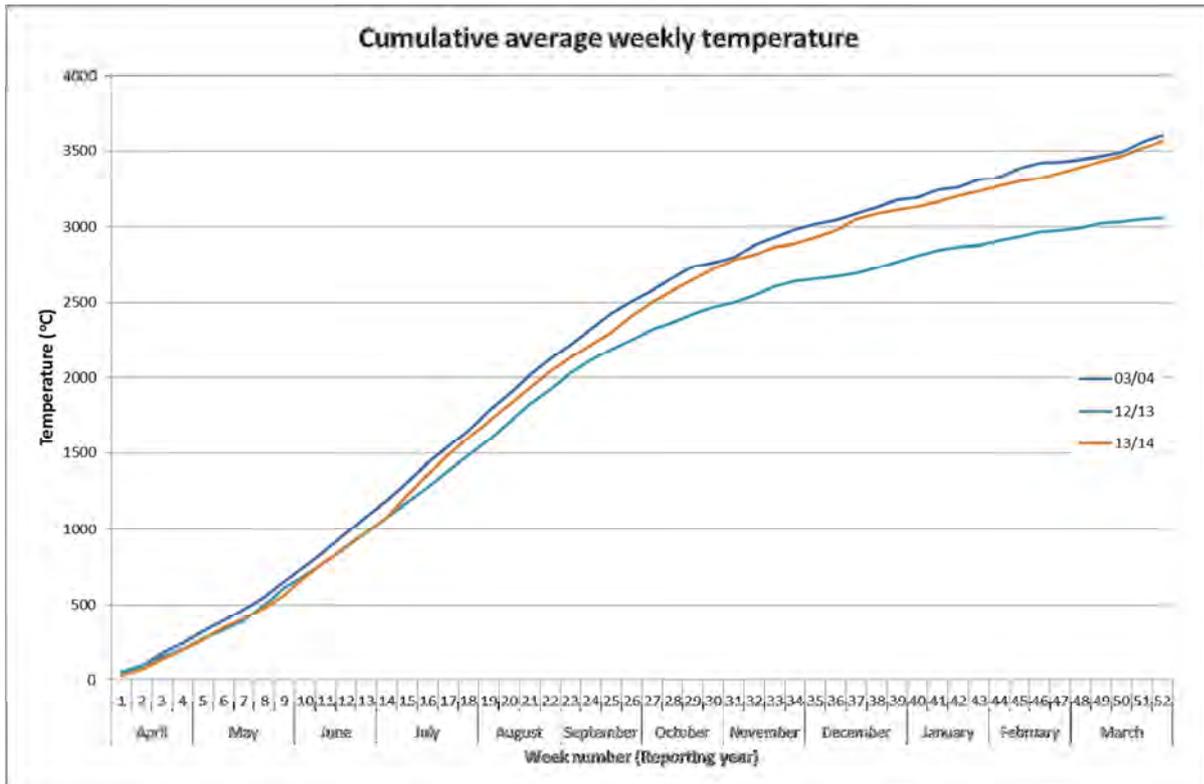


Fig 3

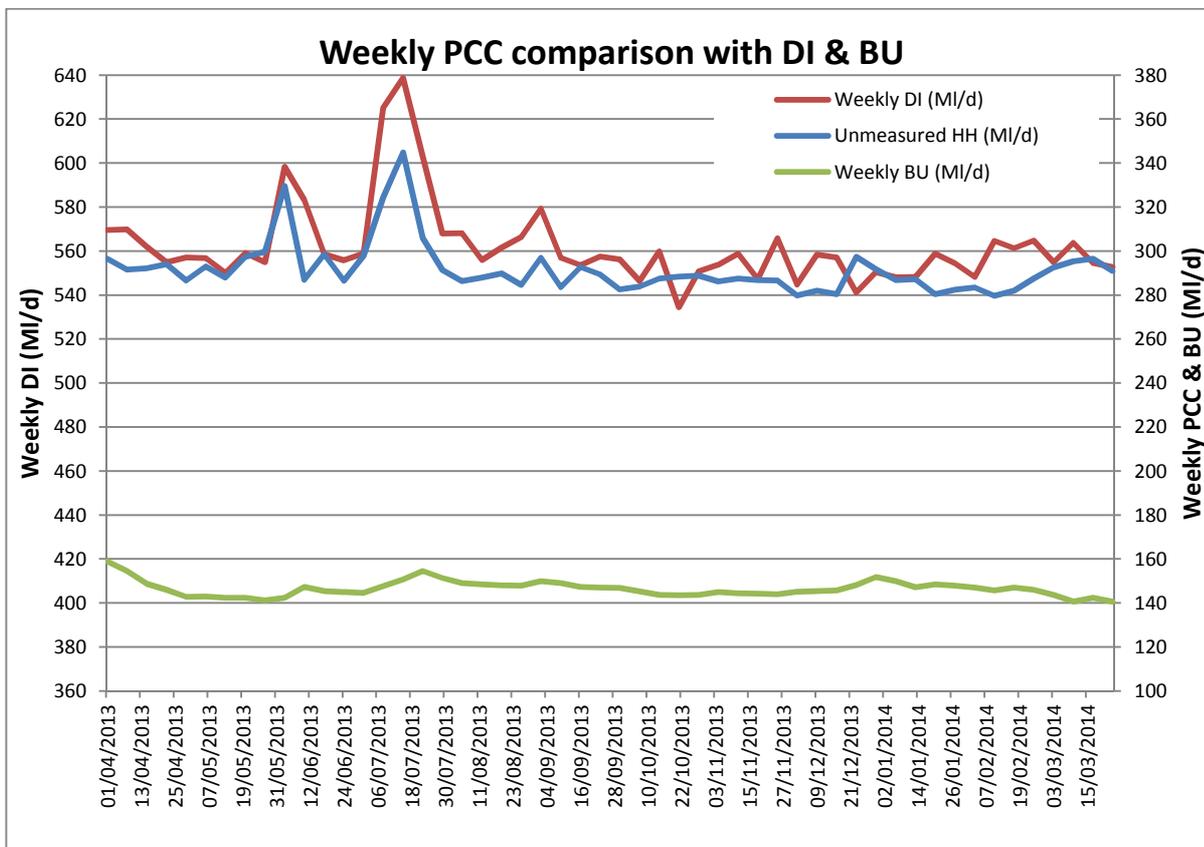


Fig 4

The graph in Fig 4 above plots the weekly DI with the PCC derived household consumption and Bottom Up leakage. This graph clearly shows the increased household demand during the periods of hot weather over the summer period, and indicates an

increase in measured non-household consumption. The net effect is an increase on measured consumption from 121.44 MI/d in AIR13 to 125.79 MI/d in AIR14 which corresponds to 4.34 MI/d.

Leakage capital investment

The PC13 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. A total of 13 sites were upgraded during the year and at present 86% of all DMA sites are now monitored directly through telemetry. This work is proposed to continue in the PC13 and PC15 periods. This has increased data availability and quality to enhance leakage monitoring, targeting and reporting as well as being available during major incidents.

During 2013/14 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 60 PRVs being installed or replaced during the year.

DMA optimisation continues to play an important role within the success of the function. In 2013/14 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, this has resulted in 42 infrastructure improvement schemes being identified and installed as part of the overall capital improvement programme.

Over the last five years the imbalance of Table 10 has reduced from a peak of 5.17% in AIR08 to the current figure in AIR14 of -0.56%. This reflects the significant amount of work that has been undertaken, initially within the Water Balance Action Plan, and subsequently via the various data improvement initiatives throughout the PC10 period. WIR Report Ref: No 95/WR/01/1 highlighted that a reducing reconciliation was indicative of improving accuracy of the water balance estimates.

In summary, the outputs of this water balance are that the Integrated Flow Method of leakage assessment has given a figure of 164.68 MI/d for total leakage and the Minimum Night Flow Method has provided a figure of 167.84 MI/d. When the resulting imbalance between the two methods of 3.15 MI/d is compared to the Distribution Input figure of 562.40 MI/d (pre-MLE), it provides a percentage discrepancy of -0.56%. 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 167.21 MI/d.

Data quality

The focus has remained on the continuing data quality throughout the PC10 period and into the first year of PC13. This has been achieved primarily via projects directly related to the continuation of the capital investment programme as per our PC13 Leakage Business Plan. Alongside this NI Water has adopted Netbase as its leakage reporting tool with AIR14 being the first official year of reporting using Netbase.

As a consequence of this, NI Water rebased reported leakage at the end of the PC10 period from 161.75 MI/d to the initial reported leakage at the start of the PC13 period of 170.73 MI/d. This is primarily due to the transition to Netbase as the leakage reporting software tool and the change in methodology to the UKWIR 20th Percentile calculation of Bottom Up leakage therefore adopting industry best practice. This was identified in the AIR13 commentary.

In addition, NI Water maintains the operability levels of DMAs at 79% and continues to compare favourably with company figures in England and Wales using similar leakage calculation software. As a result of this, and in keeping with the Reporter's AIR12 recommendation, NI Water has reduced the Bottom Up error estimate from 15% to 10% which reflects the methodology changes and new leakage reporting software.

For clarity the rebased AIR13 post MLE figure using Netbase and the UKWIR 20th Percentile methodology was 170.73 MI/d with an imbalance of -0.93%. The AIR14 post MLE leakage figure is 167.21 MI/d with an imbalance of -0.56%.

As part of the ongoing initiative to derive company specific assessments for all key aspects of the reported leakage calculation, NI Water has continued to develop a flow meter balance methodology for both trunk main and service reservoir leakage. This is consistent with the recommendations of the Reporter and Utility Regulator. To date approximately 89% of trunk main balances and 96% of service reservoirs balances have been complete and work continues to review the remaining meter and connectivity issues albeit it is believed there will always be incomplete audits due to operational reasons.

Tynemarch Systems have undertaken a peer review of the trunk main analysis and conclude that "the use of flow balances to estimate trunk main leakage is appropriate" however, the issue of uncertainty in regards to meter error is still to be addressed as part of the UKWIR study "working towards best practice trunk main leakage allowances". Although NI Water have completed a best estimate of trunk main and service reservoir leakage based on flow meter balances, it is considered appropriate to embed the monitoring and reporting process fully into Netbase to understand the dynamics of uncertainties in regards to the use of meter balances.

In preparation for the PC15 determination, NI Water engaged their Leakage Management Services consultant, RPS, to undertake an SELL assessment to forecast leakage targets for submission years AIR16 to AIR21. As part of this review, HDF has been reassessed based on 2012/13 company data, a comprehensive pressure managed area (PMA) study over the PC10 period and an extensive pressure logging exercise across the network. HDF has increased from 22.8 as reported in AIR13 to 23.2.

As HDF was last reviewed in AIR10 and in view of the number of capital improvements, extensive network rehabilitation works and data enhancements undertaken since AIR10 it is considered appropriate to update HDF to 23.2 for AIR14 and the PC13 period. Based on a HDF of 22.8, the AIR14 leakage estimate would have been 165.09 MI/d while incorporating the revised HDF of 23.2 the leakage estimate is 167.21 MI/d, an increase of 2.12 MI/d.

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 121.44 MI/d in AIR13 to 125.79 MI/d in AIR14.

For AIR14, NI Water continues to use the same type of report as per AIR11 to determine the total gross volume of water delivered in-year (1 April to 31 March) to all billed metered customers. The report 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.

In accordance with the Utility Regulators reporting requirements a volume of 1.34 MI/d (pre MUR and pre MLE) is included and accounts for water delivered which is associated with customer rebates.

A non-household meter under-registration (MUR) value of 8.33% has been added to billed measured non-household use. The company specific MUR figure of 8.33% was determined by WRc and is consistent with the figure used in AIR13.

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 AIR14 is 285.82 MI/d. This figure represents a decrease of 11.59 MI/d (3.9%) from the AIR13 value of 297.41 MI/d.

This difference has been exaggerated due to the application of MLE on a positive imbalance in AIR13 of 1.29% and a negative imbalance of -0.56% in AIR14. The pre MLE assessments of billed unmeasured households are 293.83 MI/d for AIR13 and 287.34 MI/d in AIR14, a difference of 6.49 MI/d.

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 source 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) 2012. Adjustments are made to this household population figure to account for:

- Non-Household Population – Sourced from the most recent NISRA 2008 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 2013/14 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.

During the reporting year work has continued to maintain the reliability of this value:

- A comprehensive door to door survey of approximately 20% of the Domestic Consumption Monitor Areas. This survey covered a total of 992 properties to determine more up to date information on property types, numbers of vacant properties and ultimately occupancy rates. The data from the 2013/14 survey has been input into the AIR14 consumption monitor assessment. The overall occupancy rate is 2.44 for AIR14 compared to an occupancy rate for AIR13 of 2.45. The NISRA occupancy rate for Northern Ireland is 2.46 for 2013/14.
- 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.

Line 5 – Billed unmeasured non-household

The reported value for Billed Unmeasured Non-Household for AIR14 is 6.07 MI/d. The value reported in AIR13 was 6.87 MI/d. NI Water has continued with a programme of meter installation of unmeasured non-household properties.

The assessed unmeasured non-household figure for AIR14 is 186.27 m³/prop/yr, which is a difference of 1% from the AIR13 comparable figure of 184.09m³/prop/yr.

This year's figure has been reassessed by Customer Services based on 2013/14 measured consumption data. This calculation has been subject to discussions between Customer Services and the Regulator. The methodology is consistent with AIR13 and as discussed with the Regulator.

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 8.33% is applied for AIR14.

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 AIR14 is 591.01 l/prop/d. The figure reported for AIR13 was 630.51 l/prop/d.

The allowance for unmeasured non-household properties for AIR14 is 186.27 m³/prop/yr. The calculated figure for AIR13 was 198.01 m³/prop/yr.

Line 7a – Estimated water delivered per unmeasured household

The post MLE figure for estimated water delivered per unmeasured household for AIR14 is 414.51 l/prop/d. The figure reported for AIR13 was 436.66 l/prop/d. The methodology adopted for AIR14 is consistent NIAUR's AIR14 guidance. The calculation is the product of 1000 multiplied by table 10 line 4, divided by table 7 line 3.

Line 8 – Per capita consumption (unmeasured household – excluding supply pipe leakage)

The post MLE figure for PCC for AIR14 is 145.53 l/hd/d. The figure reported for AIR13 was 149.98 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. NI Water has 100% flow coverage of these areas.

The average (pre MLE) PCC figure has been calculated as 135.38 l/hd/d. This assessment is based on 12 months consumption data from 1 April 2013 to 31 March 2014. This compares to a pre MLE figure of 136.38 l/hd/d for AIR13.

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.

In accordance with our objective to survey all PCC sites every 5 years, 992 properties have been surveyed in 2013/14 to update the area property counts and populations. This facilitates the refresh of the calculations supporting the occupancy rates for all household types and regularly revises the average occupancy rate. The information was incorporated into the AIR14 PCC Monitor.

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

The assessment of supply pipe leakage has remained constant throughout the PC10 period at 46.31 MI/d in line with NIAUR's determination to retain consistency in leakage reporting.

NI Water engaged their Leakage Management Services consultant, RPS, to review this assessment for PC13 which has resulted in the reduction of total supply pipe leakage to 39.91 MI/d. 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 total SPL remained constant at 46.31 MI/d throughout the PC10 period, it was required to adjust the per property assessed underground supply pipe unit values on an annual basis due to increasing property numbers.

Similarly, 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 MI/d.

It is proposed that this SPL assessment will remain unchanged for the duration of the PC13 period, therefore the adjusted AIR14 unit values are 51.38 l/prop/d for unmeasured, other households and void properties, with a value of 25.69 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).

Lines 14 to 15 – Meter under-registration

The company specific MUR figures provided by WRC for AIR10 have again been adopted for AIR14. For non-household consumption the MUR figure remains at 8.33%. 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 AIR14 is 2.39 MI/d. The value reported for AIR13 was 2.36 MI/d.

The confidence limit of 25% on this component has not been changed and is considered to be appropriate.

Lines 17 to 19 – Water taken unbilled

The reported Water Taken Unbilled figure of 15.64 MI/d in AIR14 is of a similar magnitude to the value of 15.30 MI/d in AIR13.

Once again occupied void consumption is now included under billed non-household as these have been confirmed as properties which have become void during AIR14.

NI Water has carried out the following work in relation to water taken unbilled:

- Data has again been sourced from the Northern Ireland Fire & Rescue Service.
- The consumption of non-household test meters has been included in Water Taken Legally Unbilled. The non-household test meter consumption has been assessed as 1.43 MI/d, including MUR, pre MLE.
- As per AIR13 the volume of water used by WTWs has been included in Water Taken Legally Unbilled.
- The same methodology has been used for water used at WwTWs which has been banded based on Ofwat's methodology, metered water used at NI Water depots and offices, an assessment of unmetered NI Water depots and offices.
- The method used for the assessment of water used at unmetered waste water treatment works is consistent with AIR13.
- Unmetered SPS consumptions have been assessed on the average consumption of metered SPSs and is consistent with AIR13.

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 AIR14 are estimated to be 127.31 MI/d. This is an increase on the AIR13 figure of 115.44 MI/d and primarily due to the reassessment of SPL.

Line 25 – Total leakage

Total leakage is the sum of distribution losses and underground supply pipe leakage. The reported figure for total leakage for AIR14 is 167.21 MI/d. The reported figure for AIR13 was 161.75 MI/d (170.73 MI/d rebased).

As highlighted in the AIR13 commentary and noted by the Utility Regulator in the PC13 Final Determination, NI Water have rebased reported leakage at the end of the PC10 period from 161.75 MI/d to the initial reported leakage at the start of the PC13 period of 170.73 MI/d. This is primarily due to the transition from TDMS to Netbase as the Company's leakage reporting software tool and the change in methodology to the UKWIR 20th Percentile calculation of Bottom Up leakage therefore adopting industry best practice.

By way of comparison, NI Water considers it appropriate to benchmark the 2013/14 leakage performance against the rebased AIR13 leakage of 170.73 MI/d.

Total leakage is also calculated using an MNF methodology. For AIR14 the reported pre MLE MNF method leakage is 167.84 MI/d. The figure reported for AIR13 was 159.38 MI/d (171.77 MI/d rebased).

NI Water has an extensive DMA network (approx. 1077 DMAs) covering 99% of all properties in Northern Ireland. Approximately 86% 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.

The non-household night use allowance figure for AIR13 was 8 l/prop/hr as documented in 'Managing Leakage', however as stated in the AIR13 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 non-household night use figure for AIR14 is approximately 11.7 l/prop/hr. It should be noted that the effective reduction in leakage due to the adoption of Netbase as the reporting tool is approximately 6.8 MI/d .

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 has been reassessed for the PC13 period as 39.91 MI/d. It is proposed that this SPL assessment will remain unchanged for the duration of the PC13 period.

Similarly, as agreed with NIAUR for the inclusion of stable data, NI Water's service reservoir leakage and trunk main leakage remain constant at 4.53 MI/d and 13.66 MI/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. To date approximately 89% of trunk main balances and 96% of service reservoirs balances have been complete and work continues to review the remaining meter and connectivity issues albeit it is understood that there will always be incomplete audits due to operational reasons.

Tynemarch Systems have undertaken a peer review of the trunk main analysis and concluded that "the use of flow balances to estimate trunk main leakage is appropriate" however, the issue of uncertainty in regards to meter error is still to be addressed as part of the UKWIR study "working towards best practice trunk main leakage allowances". Although NI Water have completed the assessment of trunk main and service reservoir leakage based on flow meter balances, it is considered appropriate to embed the monitoring and reporting process fully into Netbase to understand the dynamics of uncertainties in regards to the use of meter balances.

NI Water's current interim assessment for 2013/14 of service reservoir and trunk main leakage utilising flow meter balances is 5.89 MI/d and 14.94 MI/d respectively and does not consider meter uncertainty. Further work is required to refine NI Water's estimate and methodology particularly in relation to meter uncertainty. The figures have been provided to highlight the industry leading work that is ongoing to obtain a company specific best estimate for trunk main and service reservoir leakage.

In preparation for the PC15 determination, NI Water engaged their Leakage Management Services consultant, RPS, to undertake an SELL assessment to forecast leakage targets for submission years AIR16 to AIR21. As part of this review, HDF has been reassessed based on 2012/13 company data, a comprehensive pressure managed area (PMA) study over the PC10 period and an extensive pressure logging exercise across the network. HDF has increased from 22.8 as reported in AIR13 to 23.2.

As HDF was last reviewed in AIR10 and in view of the number of capital improvements, extensive network rehabilitation works and data enhancements undertaken since AIR10 it is considered appropriate to update HDF to 23.2 for AIR14 and the PC13 period. It should be noted that the reassessment of HDF from 22.8 to 23.2 has increased total leakage by 2.12 MI/d.

Following the implementation of Netbase and in keeping with the Reporter's AIR12 recommendation, NI Water has reduced the Bottom Up error estimate from 15% to 10% which reflects the methodology changes and new leakage reporting software.

For AIR13 and throughout PC10, Bottom Up leakage was reported using TDMS and the error estimate for AIR13 was retained at 15%. As stated earlier, a rebased AIR13 leakage calculation was produce using Netbase (170.73 MI/d) using a Bottom Up error estimate of 10% which is consistent with AIR14.

Line 26 – Distribution input

The distribution input figure for AIR14 has been calculated as a post MLE figure of 562.72 MI/d. The distribution figure for AIR13 was 558.82 ML/d. The company specific confidence interval for distribution input for AIR14 is 2.1%. This is the same as AIR13.

An independent audit of the 2011/12 DI calculation was undertaken by RPS and the findings concluded that there is a robust process behind the calculation. It also indicated that the series of meters contained within the master spreadsheet supporting the DI calculation accurately records the distribution input from all sources across the entire network.

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 (MI/d)	post-MLE (MI/d)
Ballinrees	30.39	30.41
Castor Bay	99.32	99.37
Dunore Point	91.29	91.34
Moyola	14.57	14.58
Total	235.57	235.70

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 70 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 1.09 MI/d and includes an MUR adjustment of 8.33%.

Line 29 – Water treated at own works to own customers

With the exception of the 70 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 562.72 MI/d and deducting the cross border exports the volume of water treated at own works to own customers is 561.63 MI/d.

Overall water balance

AIR14 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	126.14	10%	159.11	11.2%	-0.35	125.79
Billed Unmeasured HH	287.34	10%	825.66	57.9%	-1.82	285.52
Billed Unmeasured NHH	6.08	15%	0.83	0.1%	0.00	6.07
SPL	39.91					39.91
DSOU	2.39	25%	0.36	0.0%	0.00	2.39
Water Taken Unbilled	15.68	25%	15.36	1.1%	-0.03	15.64
Sum of components	565.55					562.72
Distribution Input	562.40	2%	143.50	10.1%	-0.32	562.72
Top Down Leakage	164.68					
BU Leakage	167.84	10%	281.69	19.7%	-0.62	167.21
Imbalance (mld)	-3.15			100.0%		
% Imbalance	-0.56%					435.41

Table 1: Water Balance Table

The Water Balance produces an overall imbalance of 3.15 MI/d, (-0.56%). The imbalance reported for AIR13 was 7.21 MI/d, (1.29%). However for comparison, the rebased AIR13 imbalance was 5.18 MI/d (-0.93%).

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 2014, the confidence grade applied to the NI Water's water balance for AIR14 is A1. The confidence level for the overall water balance for AIR13 was B2.

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 has improved from C4 in AIR13 to B4 in AIR14. The improvement is considered appropriate as the calculation of unmeasured non-household consumption has developed a robust methodology and is dependent on measured non-household consumptions. 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. A 10% error estimate has been applied to BU Leakage in the MLE calculation. Following the implementation of Netbase and the on-going improvement in data quality the error estimate has reduced to 10% from 15% in AIR13. As a result, the confidence grade has improved from B4 in AIR13 to B3 for AIR14.

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 AIR13. An improved confidence grade of A1 is considered appropriate for AIR14, as the water balance components reconcile with measured distribution input to less than 1%, 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.

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) (MI/d)	Bulk imports (MI/d)	Bulk exports (MI/d)	Dry year distribution input (MI/d)	Reporting year distribution input (MI/d)	Dry year available headroom (MI/d)	Target headroom (MI/d)	Surplus/deficit (MI/d)	Percentage surplus/deficit (MI/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	76.05	71.11	29.02	4.73	24.29	30.07%	251.431	0%	0.000	
West	75.07	0.00	0.00	64.20	60.01	10.87	4.89	5.98	8.65%	163.257	0%	0.000	
Central	11.86	19.00	0.00	27.58	25.79	3.27	1.98	1.29	4.38%	71.639	0%	0.000	
East	146.51	207.00	0.00	292.62	273.62	60.89	19.47	41.42	13.27%	922.931	0%	0.000	
South	70.17	127.00	0.00	141.28	131.87	55.88	13.00	42.88	27.80%	418.532	0%	0.000	
Total	358.69	403.00	0.00	601.73	562.40					1827.790		0.000	100

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 AIR14 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 2012/13. For 2013/14 the SOSI remains 100. This is mainly due to the following reasons;

The Water Available for Use has remained unchanged and Distribution Input (DI) has remained relatively constant from last year. In 2012/13 the total average DI was 559.41M/l/d and this has risen by 0.53% to 562.40M/l/day in 2013/14.

It is worth noting that 2012/13 was classed as a cold & wet year, which was viewed as lowering the demand. 2013/14 was deemed a more normal year as it fell within the limits of the 25th and 75th percentiles (based on analysis carried out on historical rainfall and temperature data from 1988 to 2014). Therefore a rise in demand could be expected and the minor nature of the rise likely reflects the overall downward trend in DI in normal years.

There are also a number of other factors that influence the AIR14 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 358.69M/l/d. Once complete, the Strule River abstraction will likely increase the WAFU in West WRZ.
- 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 calculation for AIR14 is believed to be an accurate reflection of the current NI Water SOSI. NI Water has begun the process of reviewing its water resources planning and it is possible that this review through 2014 and 2015 may result in some minor changes to the balance of deployable outputs available to the individual WRZs.

The total population figure used within the SOSI calculation has been confirmed to correspond with the population figure used in AIR 14 Table 7.

Table 10a (iii) – Non Financial Measures - Security of Supply Index – Critical Period (TOTAL)

As indicated in AIR14 NI Water has developed a Water Resource Management Plan, which is now company policy. The security of supply index has been calculated based on Water Resource Management Plan 2012.

In accordance with best practice guidance for water resource planning, companies generally consider their supply demand balances under different planning scenarios. For each planning scenario a baseline forecast of supply and demand is produced.

Some companies might need to derive critical period scenarios, where their supply demand balance is sensitive to these because there are sustained periods when demands are significantly higher than average; this is a peak demand condition. Supply-side characteristics may also influence whether or not critical period analysis is required, for instance, where WRZs are supplied predominantly by groundwater, or by run of river abstractions with limited storage.

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.

Table 11– Water Service Activities**Line 1 – Total length of mains at 1st April 2012**

This value has been extracted from AIR13 return.

Lines 2 – 10 - Changes during the reporting year**Commentary - General**

This document provides the commentary on the following table and lines for NIW which record the amount of capital and maintenance activity carried out in the report year 13/14 on water mains and communication pipes.

NIW has an ongoing programme of mains rehabilitation and will replace/rehabilitate 495km over the 2 year period of 13/14 and 14/15. This includes 445km through the water mains rehabilitation programme. We believe we are on target to achieve the PC13 Monitoring Plan target of 445km delivered through the Water Mains Rehabilitation Programme (WMRP).

One of the main drivers for the WMRP is water quality. The WMRP is driven by a priority scoring. The coarse information used at the outset to define Zonal study priority is further refined to determine exact construction priority. These work packages are then further split into high and low priority areas. At each stage more information has been gathered to ensure that the most accurate and up to date information is utilised.

Summary of Water mains Activity 2013-2014

Activity Description	Length (km) – 2 dp		
	2013-2014	2014-2015	PC13 Cumulative Total
New Mains (WMRP)	23.81		
Renewed Mains (WMRP)	202.31		
Relined Mains (WMRP)	0.00		
Total WMRP Activity	226.13		
Nominated Trunk Mains - New	0.18		
Nominated Trunk Mains - Renewed	0.00		
Total Nominated Trunk Mains Activity	0.18		
New Mains - New Development	26.41		
Total Mains Activity in the Period	252.72		

NB. Some figures may not add due to rounding differences.

General Commentary: EP Input to Lines 2, 3, 6, 7, 9, & 10

All 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. The

EP data is assessed as confidence grade A1 on the basis of the competency of our long term contracting partners' understanding of their reporting requirements, the quality and robustness of their on-site measurements and NI Water's Captrax management system which stores the information and is used to populate the AIR table.

Line 2 - Mains renewed (km)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
2	Mains renewed	km	2	202.31	A2	0.00	A1	202.31	A2

- 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.
- The confidence grade remains as A2, as was in AIR 13.

Line 3 - Mains relined (km)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
3	Mains relined	km	2	0.00	A1	0.00	A1	0.00	A1

- At present this operation is not carried out either by Networks Water or by EP
- **Confidence Grade: A1 as the total is zero**

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	1,096.52	B2	1,096.52	B2

- This work is carried out by the Networks Water Team. EP have no involvement in this
- 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 for various reasons. This is then converted from units to km using the previously agreed factor of 0.156km per flushing.
- 2014 information return is: 7,029no. flushings x 0.156km per flush = 1096.52km. This comprises a total count of 6834 no. flushing MST's in Ellipse, minus 755no. flushing MST's identified as not having been carried out, plus 950no. reactive flushing jobs completed.
- For AIR14 an additional flushing programme using Maintenance Scheduled tasks (MST's) has been added, primarily for dead end hydrants on iron mains. This accounts for the notable increase in the total length of main flushed.

Confidence Grade: B2

Although the total no. of reactive flushing jobs (950no.) may contain some repeat flushings at the same location these are considered to be minimal and the Company considers the data collated for this line to be continually improving.

There is also a notable reduction in the completed no. of reactive flushings which may be due to the continuing improvement in water quality standards through the on-going mains rehabilitation schemes.

As per previous audit recommendations the number of flushings have been converted to km

The number of flushings have been captured for April 13 – March 14 year using base information from MWM and then converted to km using the factor of 0.156

Future Reporting

For AIR15 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Potentially AIR15 should see a further increase in the total length of main flushed as those MST's not performed in AIR14 (755no.) should be actioned at some point.

Line 6 - New mains (km)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
6	New mains	km	2	23.99	A1	26.41	B2	50.40	B2

- Data for the period April 13 – March 14 was collated by Field Managers using system reports which when checked and confirmed were transferred onto a spread sheet managed by the Water Business Unit. This figure primarily includes data for new mains laid in new housing developments throughout the year.
- Networks Water is the sole contributor for new main laid in new housing developments. Engineering Procurement is the primary contributor for new mains (replacement upsizing).
- 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
- Networks Water -Confidence Grade: B2 As EP grade was A2 and Networks was B2 and the split in data is roughly 50:50
This figure is in line with last year's figure due to the on-going low levels of activity in the new housing market. Field Managers contributing to this line can more easily monitor lengths of new mains laid due to all work being completed solely by a contractor.

Future Reporting

For AIR15 Networks Water will continue to use the established process monthly reporting using MWM as a source for base information.

EP - Confidence grade: A1

This figure is obtained from Monthly Reports in Captrax and aggregated into an annual return

Combined NIW confidence grade: B2

This figure is arrived at by considering that there is approximately a 50:50 split between the contribution of EP and Networks Water .It is reasonable therefore to state that the NW assessment of B2 (Minor Shortcomings and a possible 5% inaccuracy should be used for this line).

Line 6a: Total Length of new, renewed or relined Mains (km)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
6	New renewed or relined mains	km	2	226.30	A1	26.41	B2	252.72	A2

NB. Some figures may not add due to rounding differences.

- This is the calculated sum of Lines 2, 3 & 6.
- Confidence Grade: A2 as the output is the sum of other lines with similar confidence grades from the same sources

Line 6b - Length of new, renewed or relined mains delivered under the Watermain rehabilitation programme (km)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
6b	New renewed or relined mains under WMRP	km	2	226.13	A2	0.00	A2	226.13	A2

- 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.

Line 7 - Mains abandoned and other changes (km)

- Engineering Procurement is the primary contributor to this information.
- Confidence Grade is stated as A2. Networks Water has not abandoned any mains outside of EP Schemes

Future Reporting

For AIR15 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Line 8a: Lead Communication pipes replaced – as a consequence of water quality sample failures (no.)

- This Data is supplied by Networks Water Only.
- Data for the reporting period April 13 – March 14 was collated by Business to Customer Field Managers using system reports which, when checked and confirmed, was input onto a spread sheet managed by the Water Business Unit who collate the data for the annual reporting period.

Confidence Grade: B2

This figure is notably down from AIR13 due to the revised definition provided i.e. "as a consequence of water quality sample failures". Previously large nos. of replacements, not necessarily due to sample failures but due to quality concerns, would have been included here. These have now been moved to line 8b.

Future Reporting

For AIR15 Networks Water will continue to use the refined definitions for Lead Communication Pipe replacements for monthly reporting using MWM as a source for base information.

Line 8b - Lead Communication pipes replaced – as a consequence of customers replacing their lead supply pipe (no.)

- This data is supplied by Networks Water Only
- Data for the reporting period April 13 – March 14 was collated by Business to Customer Field Managers using system reports which, when checked and confirmed, was input onto a spread sheet managed by the Water Business Unit who collate the data for the annual reporting period.

Confidence Grade: B2

This figure shows an increase from last year due to the reclassification of previously reported “quality” replacements in to this line

Future Reporting

For AIR15 Networks Water will continue to use the refined definitions for Lead Communication Pipe replacements for monthly reporting using MWM as a source for base information.

Line 8c - Lead communication pipes replaced – Opportunistic (no.)

Data for the reporting period April 13 – March 14 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: A2

The figure reported by Networks Water shows an increase from last year from Networks Water and may be attributable to more detailed analysis of MWM reports and quality of information provided on Work Orders. It remains problematic when analysing some Work Orders to ascertain if a full communication pipe replacement has taken place and if lead was a factor. EP have done the vast majority of this work (>95%) and therefore their Confidence Grade of A1 will dominate here rather than the B3 figure reported by Networks Water

Future Reporting

For AIR15 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Line 8d - Lead Communication pipes replaced – Proactive lead replacement programme (no.)

Networks Water did not have a proactive lead replacement programme in place for the reporting period. No proactive Lead Replacement work has been completed in the reporting period. The figure is Zero and therefore the Confidence grade is A1

Confidence Grade: A1 as the return is zero

Future Reporting

For AIR15 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Line 9: Total Lead Communication Pipes Replaced – Sum of 8b, 8c and 8d (no.)

- Lead Communication pipes replaced under quality in line 8a are excluded as directed by Networks Water.
- This is a calculated figure as 30% of data is from Networks Water and 70% is from EP Confidence Grade is B3

Future Reporting

For AIR15 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Line 10 - Communication pipes replaced – other (no.)

- Data for the reporting period April 13 – March 14 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.
- EP have reported this figure utilising Captrax and the related procedures
- The Confidence Grade reported by Networks Water is B3 The confidence grade from EP is A2 .Networks Water B3 figure is approx. 15% of this return Confidence grade is B3

This Networks water figure shows an increase from last year and may be attributable to more detailed analysis of MWM reports and quality of information provided on Work Orders

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 AIR15 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Line 11 - Mains bursts per 1000km

The specified unit for Line 11 is Mains Bursts per 1000km. 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 13 – March 14 was collated using MWM system reports which when checked and confirmed were transferred onto a summary spread sheet. 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 1000km.

Calculation of Mains Bursts per 1000km

Total Burst Mains divided by Total length of mains multiplied by 1000

$$2382 - 83 \text{ (rechargeables)} / 26698.11\text{km} = 0.0861 \times 1000 = 86.1$$

Total Bursts per 1000km = 86.1

2011 information return was 3667 (Inc. 33no. rechargeables)
2012 information return was 2746 (Inc. 81no. rechargeables)
2013 information return was 2535 (Inc. 61no. rechargeables)

Proportion of bursts within line 11 detected by proactive methods

The total number of Mains Repairs carried out by NIW was 2382 (including 83 no. due to third party damage).

The number of mains repairs carried out by Networks Water function due to non-proactive leakage detection methods was 1397.

The number of mains repairs carried out due to proactive leakage detection methods was 985.

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. There is a continued reduction from 2013 figures primarily for the following reasons:

- Mains rehabilitation schemes continue to have a positive impact in reducing the no. of defects;
- Continuing detail has been paid to the classification of mains repairs as opposed to communication pipe repairs or replacements; and
- There has been a relatively mild winter with no freeze / thaw periods through Nov / Dec 13and Jan / Feb 14.

Future Reporting

For AIR15 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

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 AIR13 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.

The initial figures submitted showed a decrease in the total length of mains for this reporting period when compared to the AIR13 figures. On investigation it was ascertained that this reduction was due to a 12km trunk main being marked as "Out of Service" on the Corporate Asset Register. Given that this trunk main has not been abandoned and could possibly come back into service the reporter has recommended that "Out of Service" trunk mains should be included in the Total length of Mains. Following this recommendation the methodology has been updated to include trunk mains that are indicated as out of service in this year's figure.

Lines 13 to 17- Distribution studies

Overview Commentary

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

There were 71 models created and completed over the past 13 years or so, which were combined into 56 Zonal studies which were completed in the AIR 12 year and are therefore all complete as shown in the table

This method 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 implications for Lines 13 to 17 are that, the specific question in relation to Zonal Study completion should probably be changed for next year to reflect progress in the new methodology.

UniqueID	Supply_Zone	Model_Name	Age
1	Altmore Phase 2&3	FT4	2004
2	Lough Ross	FT3	2004
3	Lough Ross	FT4	2004
4	Newry	RATHFRILAND	2003
5	Omagh Phase 2		2010
6	Altnahinch		2004
7	Ballinrees	Ballinrees Central	2002
8	Ballinrees	Ballinrees East	2002
9	Castlereagh		2004
10	Limavady & North East	LimavadyNorthEast	2006
11	Lisburn Urban	LisburnFM	2005
12	North Down Bangor	BangorTown	2006
13	North Tyrone		2002
14	Ballinrees	Ballinrees West	2002
15	Purdysburn East		2004
16	South West		2002
17	Breda South	Breda	2004
18	Tardree & Dunore West		2005
19	Killylane & Dunore East	Dunore East	2010
20	Castor Bay	Ballyhannon_Portadown	2004
21	Ards North Lough Cowey	WhitespotsLowLevel	2004
22	Ards North Lough Cowey	Clandeboy Upper	2004
23	Newtownards		2005

UniqueID	Supply_Zone	Model_Name	Age
24	Lisburn South Rural Ph1 & Dunmurry	Lisburn Rural South	2012
25	Castor Bay	Magheraliskmisk	2004
26	Castor Bay	Craigavon	2004
27	Castor Bay	WOTB	2004
28	Fofanny	Casterbay	2004
29	Carmoney East_Waterside	WatersideCarmoney	2005
30	Lough Ross	FT1	2004
31	Lough Ross	FT2	2004
32	Lisburn South Rural Ph1 & Dunmurry	Dunmurry	2012
33	Newry	SILENTVALLEY	2003
34	Newry	WARRENPOINT	2003
35	Newry	RATHFRILAND	2003
36	Altmore Phase 2&3	SEAGAHAN	2004
37	Altmore Phase 2&3	EDENAVEYS	2004
38	Altmore Phase 2&3	FT2	2004
39	Lough Fea		2003
40	Moyola		2003
41	Killylane & Dunore East	Killylane CWB	2010
42	Dungonnell		2004
43	Omagh		2010
44	South & South East Phase 1	Killyhevlin-Marble Arch Area	2013
45	South & South East Phase 1	Belleek Area	2013
46	South & South East Phase 1	Tattinbar North_South Area	2013
47	Altmore Phase 2&3	FT3	2004
48	Altmore Phase 2&3	FT1	2004
49	Carrickfergus	Carrickfergus	2009
50	Newry	NEWRY	2003
51	Ards North Lough Cowey	CarryduffTM	2004
52	Ards North Lough Cowey	ConligLowLevel	2004
53	Belfast East	BelfastEastHolywood	2009
54	Mid Down		2006
55	Oldpark	Ballygomartin	2009
56	Ballymena		2004

Line 18 - MZC with drinking water regulations

NI Water is currently assessed for its overall performance by a calculation referred to as Mean Zonal Compliance (MZC). Under this measurement method, there has been a steady upward trend in compliance over the last number of years.

Reporting Year	2005	2006	2007	2008	2009	2010	2011	2012	2013
Mean Zonal Compliance (average water quality at customer tap at parameter level)	99.02 %	99.34 %	99.32 %	99.50 %	99.76 %	99.82 %	99.83 %	99.80 %	99.85 %

After the PC13 control period, the means of assessment will move to overall %age compliance across all potable water analysed sites and not just at customer tap/supply point.

Line 19 - % 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.

Line 20 - Completion of nominated trunk main schemes to improve security of supply

There are three trunk mains schemes identified in the PC13 Programme all of which are anticipated to deliver in Year 2 (2014/15) of the programme. Details are provided below.

JR460	Gravity 2 – McVeigh’s Well to Oldpark SR	Under construction. Operational target 2014/15
JG035	Ballydougan to Newry TM – Phase 2B	Operational target 2014/15
JR432	Castor Bay to Belfast TM	Under construction. Operational target 2014/15

As the project is not expected to complete until Year 2 of the PC13 period the confidence was assessed as A1 following review of CPMR approvals and financial details contained within CPMR.

Line 21 - Completion of nominated water treatment works schemes to improve water quality

JP669 Killyhelvin WTW – Enforcement Order was identified at the outset of PC13 as a nominated output whilst Dorisland WTW GAC Plant was added to Sub-programme 4 under Change Protocol following enforcement direct from DWI.

Both projects are under construction with an anticipated completion target in 2014/15. Details are presented below.

JP669	Killyhelvin WTW – Enforcement Order	Under construction. Operational target 2014/15
JR463	Dorisland WTW GAC plant	Under construction. Operational target 2014/15

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 22 - Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks

There is a single project referenced as within the PC13 nominated outputs to address capacity issues at Service Reservoirs and Clear Water Tanks. The project JV830 Crieve SR has a beneficial use date in Year 2 of PC13.

JV830	Crieve SR	Operational target 2014/15
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As the project is not expected to complete until Year 2 of the PC13 period the confidence was assessed as A1 following review of CPMR approvals and financial details contained within CPMR.

Line 23 - Completion of nominated Major Incident Mitigation schemes

Five Major Incident Mitigation schemes (MIMPS) were identified as nominated outputs in the PC13 Final Determination, 3 of which were delivering in year 1 of the programme. Completing details are as contained in the following Table.

		Beneficial Use	
JI024	MIMP West Freeze Thaw Improvements	14/02/14	
JI025	MIMP South Freeze Thaw Improvements	24/01/14	
JI026	MIMP North Freeze Thaw Improvements		Under construction. Completion Target 2014/15
JI027	MIMP Central Freeze Thaw Improvements	28/03/14	
JI028	MIMP East Freeze Thaw Improvements		Under construction. Completion Target 2014/15

Following Review of the CPMR, financial and approval data the confidence grade has been assessed as B1 determined on the fact that A4 is not completed as this is Project based completion.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS - (NIW Only)**

DESCRIPTION	UNITS	DP	1	2	3	4	CG
			NR OF SOURCES	PROP'N DIST INPUT	BULK PROP'N OF D.I.	REPORT YEAR	
A SOURCE TYPES AND PUMPING							
1	Impounding reservoirs		21	0.749	0.000		B2
2	River abstractions		10	0.251	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				118.0	B4
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		0.599	9			
10	Proportion of distribution input - W4		0.400	10			
11	Proportion of distribution input - total		1.000				
12	Total numbers of works			20			
C POTABLE MAINS							
13	Potable mains (nominal bore)	km	21042.79	4067.68	1343.81	256.27	

1	2	3	4
NR OF SOURCES	PROP'N DIST INPUT	BULK PROP'N OF D.I.	REPORT YEAR

UNITS	DP	UNITS	DP	UNITS	DP
nr	0	Prop'n (0-1)	3	Prop'n (0-1)	3
21		0.749		0.000	
10		0.251		0.000	
1		0.000		0.000	
32		1.000		0.000	
				118.0	

TOTAL PROP'N OF D.I.	TOTAL NR OF WORKS
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UNITS	DP	UNITS	DP
Prop'n (0-1)	3	nr	0
0.000		1	
0.000		0	
0.000		0	
0.599		9	
0.400		10	
1.000			
		20	

BAND 1 ≤ 165mm	BAND 2 166 - 320mm	BAND 3 321 - 625mm	BAND 4 > 625mm
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21042.79	4067.68	1343.81	256.27
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NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS (PPP Only)**

DESCRIPTION	UNITS	DP	1	2	3	4	CG	
			NR OF SOURCES	PROP'N DIST INPUT	BULK PROP'N OF DI	REPORT YEAR		
A SOURCE TYPES AND PUMPING								
1			nr	0	Prop'n (0-1)	3	Prop'n (0-1)	3
2			2		0.056		0.000	B2
3			4		0.944		0.000	B2
4			0		0.000		0.000	B2
5	Average pumping head - total	m.hd	6		1.000		0.000	B2
							155.6	B4
B TREATMENT TYPE								
6	Proportion of distribution input - simple disinfection		UNITS	DP	UNITS	DP		
7	Proportion of distribution input - W1		Prop'n (0-1)	3	nr	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		0.000		0			
11	Proportion of distribution input - total		1.000		4			
12	Total numbers of works		1.000		4			
C POTABLE MAINS								
13	Potable mains (nominal bore)	km						
			BAND 1 <= 165mm	BAND 2 166 - 320mm	BAND 3 321 - 625mm	BAND 4 > 625mm		
			0.00	16.42	0.00	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	2	3	4	CG
						NR OF SOURCES	PROP'N DIST INPUT	BULK PROP'N OF DI	REPORT YEAR	
A SOURCE TYPES AND PUMPING										
1	Impounding reservoirs									B2
2	River abstractions									B2
3	Boreholes									B2
4	Source types and pumping; total									B2
5	Average pumping head - total	m.hd	1						133.7	B4
B TREATMENT TYPE										
6	Proportion of distribution input - simple disinfection									
7	Proportion of distribution input - W1									
8	Proportion of distribution input - W2									
9	Proportion of distribution input - W3									
10	Proportion of distribution input - W4									
11	Proportion of distribution input - total									
12	Total numbers of works									
C POTABLE MAINS										
13	Potable mains (nominal bore)	km	2							

TOTAL PROP'N OF D.I.		TOTAL NR OF WORKS	
UNITS	DP	UNITS	DP
nr	0	Prop'n (0-1)	3
23		0.458	
14		0.541	
1		0.000	
38		1.000	

BAND 1	BAND 2	BAND 3	BAND 4
<= 165mm	166 - 320mm	321 - 625mm	> 625mm
21042.79	4084.10	1343.81	256.27

Table 12 – Water Explanatory Factors**Water sources & treatment types – NIW only**

On 31st March 2012 NIW had 20 NR Sources in-Service consisting of 13 NR Impounding Res., 6 NR River/Lough Abstraction & 1NR BH Source.

However during the course of the year, in preparation for the AIR13 returns, WTWs Plant Managers were requested to provide sketches on their AIR13 Detail Certification (Supply) sheets, to clearly portray the sources pertinent to each WTW. Following review of these certification sheets it was realised, that a number of updates were required to some WTWs regarding their sources. In addition NI Water applied the ‘cascade’ rule (i.e. where a reservoir receives water in part from an upstream reservoir and in part from its own catchment then this reservoir has been included as a source) to enable inclusion of the additional impounding reservoirs as sources.

These updates were reported on for AIR13 and were not as a result of interventions on the ground but due to reporting back to Asset Management regarding the actual sources associated with the WTWs.

There have been no further changes since AIR13 and the following table shows what was reported on prior to the changes on 31st March 2013 and what is currently being reported on for AIR14.

Location	AIR14 Source Type	Treatment Type	In Service during AIR 13	In Service at 31st Mar 2013	In Service at 31st Mar 2014
Gortlenaghan	Borehole	SD	No	No	No
Shanmoy BHs	Borehole	SD	No	No	No
Lenamore Spring	Borehole	SD	No	No	No
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	Lough (previously indicated as an Impounding Reservoir)	W3	Yes	Yes	Yes
Drumaroad	2No Imp. Reservoirs (Ben Crom IR & Silent Valley IR)	W3	Yes	Yes - Now viewed as 2No. sources	Yes - Now viewed as 2No. sources
Caugh Hill	Imp. Reservoir - Altnaheglish IR & River (Glenedra)	W3	Yes	Yes – Now viewed as 2No. sources	Yes – Now viewed as 2No. sources
Glenhordial	Imp. Reservoir	W3	Yes	Yes	Yes
Lough Bradan	2 No Lough Bradan Imp. Reservoir, and Lough Lee	W4	Yes	Yes Now viewed as 2No sources	Yes Now viewed as 2No sources

Location	AIR14 Source Type	Treatment Type	In Service during AIR 13	In Service at 31 st Mar 2013	In Service at 31 st Mar 2014
Altmore	Imp. Reservoir	W3	No	No	No
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)	W3	Yes	Yes Now viewed as 7No. sources	Yes Now viewed as 7No. sources
Lough Macrory	1No Imp. Reservoir & 1No Lough (Lough Fingrean IR & Lough Macrory-Lough (previously indicated as an Impounding Reservoir))	W4	Yes	Yes Now viewed as 2No. sources	Yes Now viewed as 2No. sources
Clay Lake	Imp. Reservoir	W4	Yes	Yes	Yes
Fofanny	3No Imp. Reservoir (Lough Island Reavey, Fofanny, Spelga)	W4	Yes	Yes – Now viewed as 3No. sources	Yes – Now viewed as 3No. sources
Seagahan	Imp. Reservoir	W4	Yes	Yes	Yes
Camlough	Lough	W4	Yes	Yes	Yes
Killyhevin	Lough	W4	Yes	Yes	Yes
Carran Hill	Lough	W4	Yes	Yes	Yes
Belleek	Lough	W3	Yes	Yes	Yes
Carmoney	River	W4	Yes	Yes	Yes
Derg	River	W4	Yes	Yes	Yes
Glarryford	Borehole	W2	No	No	No
Cabragh	Borehole	SD	No	No	No
Total			20	32	32

Further details on the changes to source type adopted for AIR13 can be seen below:

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 13/14 indicates that 16% of the raw water into the WTWs came from Glenedra River during the

AIR14 period, and this is identical to what was reported in AIR13. The Distribution Input for Caugh Hill has therefore been split in the ratio of 84:16 between the IR and the River, for the computation of the proportional distribution input for Lines 1 to 3.

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.

NIW is listing Altnaheglish IR and Glenadra River as two sources for Caugh Hill WTWs, for AIR14.

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 AIR14.

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. Approximately 2MI/D is taken from Lough Lee which enters into the pipework between Lough Bradan IR and the WTWs. Any extra coming from Lough Lee would backup into Lough Bradan IR and would vary depending on rain fall amounts.

4. Camlough WTWs

It is noted that although the source of raw water to Camlough WTWs is Camlough Lake, it is not classed as an impounding reservoir within this AIR table as the impounding structure or the lake is not owned or maintained by NI Water. Hence it is classed as a lough for Table12.

5. Lough Fea WTWs

Lough Fea WTWs is fed by Lough Fea, which is a lough.

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. NIW is listing Lough Macrory and Fingrean IR as two sources for Lough Macrory WTWs, for AIR14.

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.

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, for AIR14.

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.

Capacities of NIW's impounding reservoirs (21No)

The table below depicts the capacities of the 21 NIW Only Impounding Reservoirs which were in service during the AIR14 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	1250	ALTNAHINCH WTW
Altnaheglis IR	2227	CAUGH HILL WTW
Clay Lake IR	1468	CLAY LAKE WTW
Lough Mourne IR	2261	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	2153	DORISLAND WTW
North Woodburn IR	372	DORISLAND WTW
Dorisland IR	302	DORISLAND WTW
Ben Crom IR	7718	DRUMAROAD WTW
Silent Valley IR	13276	DRUMAROAD WTW
Dungonnel IR	942	DUNGONNEL WTW
Lough Island Reavey IR	9092	FOFANNY WTW
Spelga IR	3559	FOFANNY WTW
Fofanny IR	376	FOFANNY WTW
Glenhordial IR	92	GLENHORDIAL WTW

Raw Water Source – IRs	Total Capacity(ML)	Head WTWs
Killylane IR	1327	KILLYLANE WTW
Lough Bradan IR	950	LOUGH BRADEN WTW
Lough Fingrean IR	1078	LOUGHMACRORY WTW
Seagahan IR	2453	SEAGAHAN

The source type's totals in service for part or all of AIR14 include in total: - boreholes (1nr), impounding reservoirs (21 nr), and rivers & loughs (10 nr). The treatment type totals in service for part or all of AR14 include - simple disinfection (1 nr), W1 (0 nr), W2 (0 nr), W3 (9 nr) & W4 (10 nr).

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 steps are taken to realign the data.

More understanding is required regarding the proportion of raw water from impounding reservoirs and loughs received at works such as Lough Macrory WTWs and Lough Braden WTWs.

The following table summarises NIW's position, at 31st March 2014, regarding mothballed boreholes, (i.e. boreholes which are not capable of being brought into service at reasonable notice), emergency boreholes, (i.e. boreholes capable of being brought into service at reasonable notice), and abandoned WTWs, compared to the status on 31st March 2011, 2012 and 2013.

Status as at:	'Mothballed' Boreholes	'Emergency' Boreholes	Abandoned WTWs
31st March 2011	34	2	22
31st March 2012	38	1	23
31st March 2013	39	0	23
31st March 2014	39	0	23

There have been no changes since AIR14.

Lines 1 - 4 and 6 - 11 - Distribution Input

Leakage has provided the AIR13 Distribution Input figure of 562.4 MI/d Distribution. It has been assigned a Confidence Grade of B2, which has not changed since AIR10.

The DI figure is the average amount of potable water entering the distribution system and supplied to customers within the company's area of supply. All distribution input meters are on telemetry and these report via the Serck Telemetry system to TDMS and this discrete list of sites forms the templates on which calculations are based.

The reporting process produces a DI total on a daily basis using a single spreadsheet with the minimum amount of data input and a maximum amount of spreadsheet calculation. The data is extracted from TDMS using automated functionality within that system to transfer to an Excel spreadsheet with all information calculated in MI/day. Conditional formatting is employed to enable comparison with previous days, weeks and months. All

files are password protected with access only to those involved in the data capture and audit process. The M&E Function undertake a calibration programme of all DI meters on an annual basis.

It should be noted that this figure may be affected by the Water Balance Calculation, whereby adjustments are applied to all components including Distribution Input, creating a post Maximum Likelihood Estimate leakage DI value.

Proportional Distribution Input (DI) - for 'NIW only', 'PPP' and 'Total' Tables

The proportional distributional input has been calculated using the spreadsheet provided by Leakage, depicting the 562.4 ML/d Distribution Input, with sources (NIW and PPP) as listed below, with associated DIs.

Company Total DI

Supply Source	Average DI (ML/d)
Altnahinch	8.41
Ballinrees	30.39
Belleek	1.64
Camlough	3.30
Carmoney	17.59
Carran Hill WTW 2	5.78
Castor Bay	79.24
Caugh Hill	14.60
Clay Lake	3.52
Derg	13.90
Dorisland	26.29
Drumaroad Draper Hill	110.43
Dungonnell	7.86
Dunore Point	91.29
Fofanny WTW	36.14
Forked Bridge	20.08
Glenhordial	3.97
Killyhevlin	23.24
Killylane	11.44
Lough Bradan	6.95
Lough Fea	11.23
Lough Macrory 2	10.50
Moyola	14.57
Rathlin Island	0.07
Seagahan WTW	9.97
Company Total AIR 13 DI	562.4

NIW Only DI

Supply Source	Average DI (ML/d)
Altnahinch	8.41
Belleek	1.64
Camlough	3.30
Carmony	17.59
Carran Hill WTW 2	5.78
Caugh Hill	14.60
Clay Lake	3.52
Derg	13.90
Dorisland	26.29
Drumaroad Draper Hill	110.43
Dungonnell	7.86
Fofanny WTW	36.14
Glenhordial	3.97
Killyhevlin	23.24
Killylane	11.44
Lough Bradan	6.95
Lough Fea	11.23
Lough Macrory 2	10.50
Rathlin Island	0.07
Seagahan WTW	9.97
NIW Only AIR 13 DI	326.83

PPP only DI

Supply Source	Average DI (ML/d)
Ballinrees	30.39
Castor Bay	99.32
Dunore Point	91.29
Moyola	14.57
PPP Only AIR 13 DI	235.57

Line 5 - Average pumping head – NIW only / PPP only / Total company

The NIW 'Total' AIR14 Average Pumping Head is 133.73m.hd with a confidence grade of B4. The Average Pumping Head for AIR13 was 139.6m.hd.

Introduction

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 NIW have been investigating alternative data sources, principally Telemetry, for updating and improved confidence. Data sourced from NIW telemetry system, Telemweb, had been included in

the APH calculation from AIR12. For AIR14 the use of data from telemetry has continued to be used and has been expanded with approximately 35% of pumpset returns based fully or in part on telemetry data.

For AIR14, NIW had 377 pumpsets in service. Of these 129 are based on flow and/or lift data from telemetry. 66 of the 377 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 103 pumpsets with an individual contribution greater than or equal to 50m.h. Of these 62 are based on flow and / or lift data from telemetry.

The Average Pumping Head figure has reduced by 5.87m.hd from AIR13. Distribution pumpsets have contributed a fall of 0.66m/hd to the overall figure, with Supply and PPP pumpsets -2.76m.hd & -0.86m.hd, respectively. The reduction can be attributed mainly to the introduction of telemetry data. 1.65m.hd of the overall reduction is a result of the identification of duplication pumpsets.

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 27% of pumpsets returns now based on telemetry data. This is in keeping with the Reporters 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 2 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.

Field Managers have identified installations where operational status has changed from AIR13. These are:-

- Casheltown WPS (out of service during AIR14 reporting year)
- Slaght Lane WPS (out of service during AIR14 reporting year)
- Greenhill Ballymena WPS (out of service during AIR14 reporting year)
- Galdanagh WPS (out of service during AIR14)
- Knocknagore Ballymacanallen WPS (out of service during AIR14 reporting year)
- Buckna Broughshane Oaklands WPS (out of service during AIR14 reporting year)
- Coagh East WPS (out of service during AIR14 reporting year)

and have been removed from the calculation.

In addition to the above one other pumpset has been identified that has been taken out of service during the reporting year. The site in question is:-

- Lisnahunshin WPS (taken out of service late 2013).

As it was in service for the majority of the reporting year it has been included in the calculation for AIR14.

Where mean lift and average 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 0.66m.hd to the overall reduction from AIR13. The main contributors are Crewcat WPS, Hydepark North WPS and Buckna Broughshane Kaneshill WPS with individual reductions of 0.28m.hd, 0.16m.hd & 0.13m.hd, respectively.

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 approximately 67% based on flow and / or lift data obtained from Telemweb.

Changes to Supply pumpsets have contributed 2.76m.hd to the overall reduction from AIR13. The main contributors are Derg-Tullywhisker HL, Faughan RWPS, Carmoney Interstage, Carmoney Final Water, Caugh Hill Interstage with individual reductions of 0.28m.hd, 1.79m.hd, 0.17m.hd, 0.27m.hd & 0.14m.hd, respectively. Drumaroad-Dunmore has contributed an individual increase of 0.2m.hd.

Distribution Input (DI)

The Company DI (562.4Ml/d), NIW Only DI (326.83Ml/d) and PPP Only DI (235.57Ml/d) have all been provided by the Company's Leakage Section. There is a slight difference in the PPP Only DI provided by the Company's Leakage Section and the PPP Concessionaire (235.41Ml/d). 235.57Ml/d has been used to calculate PPP only Average Pumping Head.

PPP pump data in master pump table

Flow and lift information has been provided by the PPP Concessionaire.

Changes to PPP pumpsets have contributed 0.86m.hd to the overall reduction from AIR13. The main contributors are Dunore Point RWPS & Dunore WTW HL, with individual reductions of 0.55m.hd & 1.25m.hd, respectively. River Bann RWPS and Ballinrees WTW HL have contributed individual increases of 0.29m.hd & 0.6m.hd.

Identified anomalies

Five pumpset duplications have been identified for AIR14. The duplications identified are:

- Kilfeaghan WPS,

- Ballinliss 2 WPS,
- Ballinliss 2 WPS,
- Dorisland WTW CWT to SR and Break Pressure Tank, and
- Newry West Pumps

These pumpsets have also been removed from the AIR14 calculation. These duplications would have made a combined contribution of 1.65m to the overall calculated figure.

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 has 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 117.98m.hd and 155.58m.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 155.58m.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 states '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.

A confidence grade of 'B4' has been allocated to these values of 117.98m.hd and 155.58m.hd for the 'Average Pumping Head' for NIW only and PPP only respectively.

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.

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 2012/13 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 2 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.

66 of the 377 as having an 'in service' operational status during AIR14 period have no or incomplete data, no return has been made for these pumpsets. 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

The Confidence Grade is B4 as per the Reporter recommendations from AIR13 submission.

Improvements from AIR13

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.

Future improvements

Continued roll-out of telemetry data - It was hoped more information would have been available for AIR14 but some telemetry points were not picked up by the report. By the time this was highlighted it was too late to make the necessary changes to allow data to be made available for this reporting period. This will be addressed for AIR15 and it is hoped all relevant data from Telemweb will be available.

Recommendations for future returns

Continue the rollout programme of obtaining data from telemetry as indicated in Future Improvements above.

Average Pumping Head result comparison from 2008 to 2014

	DI MI/d	Sum (flow x lift)	Average Pumping Head
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

Line 13 - Potable mains

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. There have been no significant improvements in data quality since the AIR13 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.

The initial figures submitted showed a decrease in the total length of mains for this reporting period when compared to the AIR13 figures. On investigation it was ascertained that this reduction was due to a 12km trunk main being marked as "Out of Service" on the Corporate Asset Register. Given that this trunk main has not been abandoned and could possibly come back into service the reporter has recommended that "Out of Service" trunk mains should be included in the Total length of Mains. Following this recommendation the methodology has been updated to include trunk mains that are indicated as out of service on the Corporate Asset Register in this year's figure.

PPP

There has been a change to the PPP Water sources over the reporting period. 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 to the Ballinrees Impounding Reservoir. NI Water has also included the Altikeeragh IR as a source for Ballinrees WTW as it supplied a substantial proportion of the water for Ballinrees WTW during the period 2012-13.

Lines 1- 4 Column 1 only – Number of sources (PPP)

The PPP Water sources have remained consistent over the reporting period for AIR14 as they were with AIR13. In accordance with AIR13, 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 to the Ballinrees Impounding Reservoir. NI Water has also included the Altikeeragh IR as a source for Ballinrees WTW as it supplied a substantial proportion of the water for Ballinrees WTW during the period 2013-14.

As described above Ballinrees WTWs is supplied by Ballinrees IR, which in turn is supplied mainly by Altikeeragh IR (43.21% - during AIR14) and the River Bann (56.79%- during AIR14).

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, has varied from last year's average flows.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 13 NON FINANCIAL MEASURES
SEWERAGE PROPERTIES & POPULATION (TOTAL)**

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2010-11	CG	2011-12	CG	2012-13	CG	2013-14	CG	
A PROPERTIES											
1	Households properties connected during the year	000	3	3.938	B3	3.001	B2	3.455	B2	3.108	B2
2	Non-households properties connected during the year	000	3	0.224	B3	0.236	B2	0.123	B2	0.106	B2
B BILLING											
3	Households billed unmeasured sewage	000	3	574.400	C2	580.815	A2	586.127	A2	591.043	B2
4	Households billed measured sewage	000	3	0.000	A1	0.000	A1	0.000	A1	0.000	A1
5	Households billed sewage	000	3	574.400	C2	580.815	A2	586.127	A2	591.043	B2
6	Non-households billed unmeasured sewage	000	3	11.496	B3	10.109	A2	9.250	A2	8.706	A2
7	Non-households billed measured sewage	000	3	22.374	B2	22.622	A2	23.014	A2	23.347	A2
8	Non-households billed sewage	000	3	33.870	B3	32.731	A2	32.250	A2	32.053	A2
9	Void properties	000	3	42.988	B3	44.605	A2	44.637	A2	44.479	B2
C POPULATION											
10	Total connected population	000	3	1459.467	B3	1476.185	B3	1512.024	B3	1514.925	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 report year.
Block C Population (Lines 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 report year.

The information in this table is used for the water balance calculation and also in tariff and 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 2014/15. NI Water is subsidised for these domestic customers by Department for Regional Development (DRD).

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 DRD (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 AIR14. 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 initiatives such as the data quality programme, and/or
- unmeasured non-domestic metering programme (UNHH) which refers to a specific regulatory target as set out in PC10 Appendix 19 submission.

The Data Quality programme has been considering a number of initiatives to further cleanse customer data, particularly legacy customer data (data which was inherited from DRD Water Service in April 2007) – such projects include Test Meters, Rapid-Pointer alignment, Third-party data sources (which looks to commercially available databases to provide enhanced customer and property information to deliver more robust customer and billing information), Pipe Size, Customer and Property analytical tools, etc.

We have used a number of 3rd party data sources, (the primary being the POINTER dataset) to ensure our property information is as robust and accurate as possible.

The roll-out of the metering programme has continued. Overall, based on the Rapid Property Summary extract, the number of non-domestic unmeasured properties has decreased during 2013/14 from circa 8900 in March 2013 to circa 8,500 in March 2014. This shows a reduction of circa 400 in year.

This continued year on year reduction is the result of the UNHH programme, both through the installation of new meters on unmeasured non-domestic properties and the finding of existing meters on other similarly classified properties.

The basis and targets for the UNHH is set out in the PC10 submission and is a regulatory requirement through the 'unwinding' of the estimated average unmeasured consumption to a single figure by the end of PC10 period (End March 2013) for both leakage/water balance calculation and tariff setting/charging. The original estimated target was 170.61 m³/prop/year. This was to be delivered through the reclassification of 3100 properties from the unmeasured to measured category, based primarily on the installation of meters.

The UNHH consumption has been monitored throughout a 3¹/₄ year period, commencing January 2010, with regular updates provided to NIAUR. The approach taken in order to achieve the target varied over the 3 years:-

- Year 1 – Properties targeted on a priority basis (largest consumers 1st).
- Year 2 – Properties targeted on a geographic / 'value for money' (VFM) basis, from an efficiency perspective.
- Year 3 – Properties revert to original prioritisation on consumption (largest consumers 1st).

The difference between Year 1 and Year 3 is the priority order given to each Property Type. The reworking of the methodology, described, below has caused the list of top consumers to be reordered, based on the recalculated average consumption per property type. The unmeasured average is based on actual consumption for the corresponding measured property type.

The original projection had been based on 2008/09 consumption and recognised that consumption trends can vary year on year, especially given the economic and consumption downturns. During 2012, we undertook an exercise to review and reforecast the average UNHH consumption per Property Type, which would result in a more up-to-date consumption figure for the UNHH properties. This was a lengthy and complex

process, as explained in a presentation to UR on 1st August 2012, based on the steps set out in Annex A.

Following the review, completed in September 2012, we forecast forward 6 months (to March 2013), based on removing a further 500 'priority' properties from the unmeasured dataset. This recalculation resulted in a slight increase to the original PC10 target

Original PC10 target estimate	170.61 m ³ /prop/yr
Revised end PC10 estimate	176.68 m ³ /prop/yr

This revised average UNHH consumption figure of 176.68 m³/prop/yr was used in the PC13 submission.

In March 2013, we re-calculated an unmeasured non-household consumption figure of 198.01 m³/prop/year, based on March 2013 actual property count but 2011/12 consumption data. This was used in AIR13 by Leakage.

In September 2013, the average UNHH consumption model was re-run to include updated consumption volumes from the 2012/13 reporting year. This indicated an average UNHH consumption of 184.09 m³/prop/year.

UR had expressed their concerns at the different estimates being provided when a single figure was expected as an outcome of the PC10 UNHH project. A presentation to the UR on 20th September 2013, set out the basis for each figure, the issue of timing & availability of information at that time and requested clarification of which figure should be used in future submissions.

- PC13 revenue allocation applies to 2013/14 and 2014/15. It used a forecast UNHH consumption of 176.68 m³/prop/yr.
- AIR13 did not use the same figure for UNHH consumption as used in the PC13 revenue allocation since AIR13 reflects estimated historical consumption as opposed to the forecast consumption. At time of compilation the best available consumption was 2011/12 data, giving an estimated average UNHH consumption of 198.01 m³/prop/yr.

Overall, the revised estimated average UNHH consumption of 184.09 m³/prop/yr, is approximately 4.5% higher than the PC13 forecast of 176 m³/prop/yr and 7.9% higher than the original PC10 forecast of 170.61m³/prop/yr.

As part of our AIR14 submission we committed to updating the average UNHH consumption with 'End March 14' UNHH property numbers and 13/14 consumption – resulting figure 186.27 m³/prop/year. This will be used in AIR14 by Leakage.

As part of PC15 we met with the Reporter to discuss the UNHH consumption calculation, methodology and progress since the start of the PC10 period. We provided answers to the following questions raised by the Reporter during a meeting on 18th March 2014.

- Could we confirm how many properties were added to the UNHH category year on year and the reasons for addition?
- Could we confirm how many properties were removed from the UNHH category year on year and the reasons for removal?
- Could we confirm which properties, from the chosen datasets, have remained unchanged during the PC10 UNHH exercise?

Under the Water & Sewerage Services (2006) Order, NI Water is required to install meters on all new household connections since April 2007. As explained above, customers are not being charged on a measured basis, so the property is still being 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 provides us with a snapshot at the end of each month in terms of gross movements; it doesn't 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 of Enterprise, Trade and Investment (DETI) and the Central Statistics Office (CSO), Ireland. Population is based on the ratio of % water/sewerage properties and the estimated population served for water services. This is set out in the corresponding line methodology.

From the Rapid Property Summary there are deemed to be 596 (gross) 'unmeasured – not charged' properties which (based on sample taken) are mostly NI Water premises as per table below.

Unmeasured - Not Charged	Count
NI Water	548
Fire Authority	13
Other	35
Total	596

NI Water is currently investigating any 'unmeasured – not charged' properties outside of NI Water ownership to ensure the categorisation is correct.

Test meters

In response to the following AIR13 Reporter's Recommendation:-

"NI Water should work further towards fully implementing the outcomes of the Test Meter project within their property estimates."

The remaining test/retain for review meters have been raised with relevant Heads of Function (Metering and Billing & Revenue) to confirm what is being planned in this area. Where test meters couldn't be resolved under the project, they were categorised as below. Meter readings were to be reviewed over a period of time to help determine the correct status of these test meters.

Retain for Review Breakdown	Count
Retain for Review	1353
RFR-Compensation Supply Query	20
RFR-No Billable Name/Add	84

RFR-Shared Supply	105
RFR-Unable to Locate	443
Test Meter	2
Total	2007

Under the Test Meter project, those that were found to be non-domestic billable were attributed to the non-domestic measured category and billed retrospectively to April 2007.

A contrasting approach has been adopted for the treatment of 'test' meters for household and non-household properties, whereby 'test' meter numbers have been included in household property numbers but excluded from non-household numbers.

As per last year, no allowance is being made for non-domestic test meter numbers until their status is confirmed and uploaded onto Rapid. As discussed with the Reporter in November 2009, these test meters have not been added to the unmeasured base being deemed to be water taken legally unbilled.

The Reporter queried the logic of this assumption and was advised that the non household 'test' meters have not been included as the status of these accounts is still uncertain and further work to ascertain whether these are actually 'billable' properties, needs to be undertaken. You could argue that by adopting this approach, NIW is understating the number of billable non-household properties included in the tariff model, as it would be reasonable to assume that a number of the test meters will prove to be billable non-household properties.

However, the Reporter believes that NI Water has adopted a prudent approach, and as we work to fully verify each test meter it is possible that the number of test meters assigned to the measured non-household customers could reasonably be expected to increase over time as the status of more accounts of this nature are assessed and verified.

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). However, there are 525 domestic properties classified as site meters and these will require further investigation and analysis to be completed during 2014/15 to ensure these are classified correctly.

The number of non-domestic site meters has increased by 191 during 2013/14.

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 property numbers have evolved over the reporting year.

Property Numbers	March 13	March 14
	Actual	Actual
Start of Year	583491	588763

New/Metered (plus)	(+) 3455	(+) 3108
Data Cleanse/BAU Activity	(+) 2873	(+) 1008
Test Meters	(-) 571	(-) 6
Site Meters	(+) 8	(+) 6
Voids	(-) 493	(+) 444
End	588763	593323

Property Numbers	March 2013	Dec 2013	March 2014
Unmeasured Sewerage Gross Household (L9 year end sub calc)	623278	626830	628282
Unmeasured Sewerage Occupied Household (L3 year end sub calc)	588763	592103	593323
Unmeasured Sewerage Voids Household	34515	34727	34959

Household Voids	Voids	Difference (in-year)
March 2014	34959	(+) 444
March 2013	34515	(-) 493
March 2012	35008	

In the table above, the figure of 3108 for data cleanse / BAU activity can be explained as follows;

- 1) New Connections during the 2013/14 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:
 - a) The adding of properties NI Water allegedly didn't know about (This is the gap the Rapid-POINTER Phase 3 project demonstrated and Phase 4 aims to close out).
 - b) 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.

NI Water recognises there is an anomaly in terms of property numbers (between our 'Customer Contacts and Billing Database' and 'POINTER') – The Rapid-POINTER Phase 3 project has completed a pilot study and Phase 4 will aim to address this issue across Northern Ireland. NI Water hasn't had an update from LPS in terms of domestic data since 2007 – Our only form of update has been through customer contact. We recognise there is a need to review the process for both the creating and the demolishing of a property. This will be taken forward as part of our Data Quality work. As part of this work, we are also carrying out analysis and review of both water and sewerage status particularly in terms of data primacy.

Measured household property movement

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 2013	1 st Dec 2013	March 2014
Unmeasured Sewerage Gross Non-Household	16015	15590	15509
Unmeasured Sewerage Occupied Non-Household (L6 year end sub calc)	8916	8420	8495
Unmeasured Sewerage Voids Non-Household	7099	7170	7014

Measured non-household property movement

Property Numbers	March 2013	1 st Dec 2013	March 2014
Measured Sewerage Gross Non-Household	25902	26037	26125
Measured Sewerage Occupied Non-Household (L7 year end sub calc)	23151	23380	23543
Measured Sewerage Voids Non-Household	2751	2657	2582

Non household voids

Non-Household Voids	Voids	Difference (in-year)
March 2014	9606	(-) 250
March 2013	9856	(-) 12
March 2012	9868	

Additional information

As Table 13 is based on averages, please find summary table below for 1st April 2013, 1st December 2013 and 1st April 2014.

Property Numbers	March 2013	1 st Dec 2013	March 2014
Unmeasured Sewerage Household	588763	592103	593323
Unmeasured Sewerage Non-Household	8916	8420	8495

Measured Sewerage Non-Household	23151	23380	23543
Voids	44371	44562	44565

Annex B details the Line Methodology followed for each of the figures calculated in Table 13.

Confidence Grades

We have kept the confidence grades consistent with those of AIR13. 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 similar. The automated tool (developed during AIR12) to populate the base property tables has remained in place for AIR14.

Annex A – Rebaselining and recalculation of average estimated consumption

Step 1 – Update base information with revised UNHH property numbers

- As properties have moved out of the unmeasured non-domestic category (due to metering activity, data cleanse, etc) from the start of the project, this has reduced the number of unmeasured properties which has been input to the UNHH calculation to reflect a revised total average unmeasured consumption.
- All other assumptions and individual property type averages remained unchanged.
- The change in properties and associated drop in consumption has been reported regularly to EC/UR to update them on progress.

Step 2 – Recalculate estimated average consumption

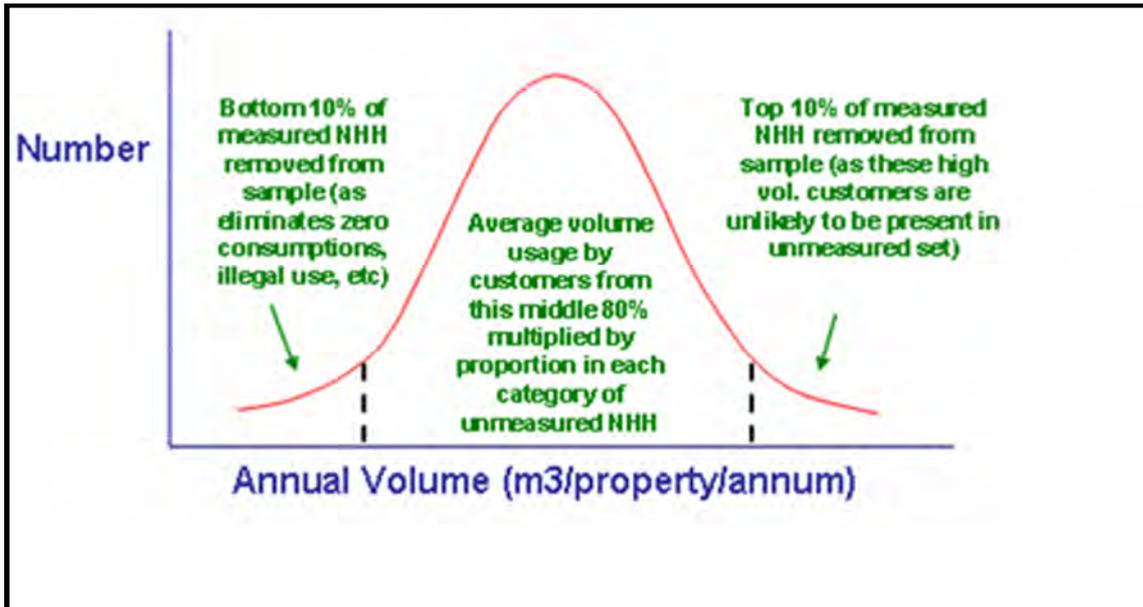
- As stated in step 1, the consumption had remained unchanged since the original calculation in 2008/09.
- During this time, measured consumption has reduced and therefore we need to consider this reduction in the UNHH individual property type and overall average calculations.
- We used March 2012 measured consumption data for our new consumption baseline and agreed to update yearly thereafter.
- For AIR14, the model will be updated with the 13/14 consumption data to enable calculate of an up-to-date average UNHH consumption.

Step 3 – Align property types with meter industry codes

- During our analysis of the various data components, we identified a number of property type/meter industry code mismatches, such as cattle troughs linked to funeral parlours, farm outbuildings to air and sea terminals, hairdressers linked to primary schools, etc.
- Given the work already on-going in the previous steps and to ensure that the overall average was an accurate representation of the dataset, we restructured the underlying data (proptype-meterindcode) through a desktop exercise.
- This restructured data has been added to the list of projects being taken forward through the reconvened Data Integrity Group/Customer Services Data Quality programme, which will ultimately see this restructure applied to Rapid.

Step 4 – Review original assumptions – 80/20 profile by meter industry code

- So far we've considered the property numbers, consumption and alignment of property types. To complete the re-baselining exercise we needed to review the original assumptions to confirm that they were still valid.
- PC10 Appendix 19.1 used 80/20 methodology to calculate the consumption per property type – see following diagram. This basically looked at the measured consumption per meter industry code, with the top and bottom 10% of the consumption removed and the average based on the middle 80%, as per diagram below (taken from Appx 19.1).
- Our analysis confirmed that zero consumption meters were also included in these datasets, skewing the figures, and should be removed before the 80% TRIMMEAN function was applied.



Annex B – Line Methodology for Table 13**Line 1 - Household properties connected during the year**

This refers to the number of new household (domestic) properties added to the sewerage network during the reporting year. (Previously not connected to the sewerage system)

It is based on reconciled New Connections information extracted directly from Rapid (via CorVu), with an applied series of filters to identify New Connections. It is NIW policy to install meters on all New Connections.

Households properties connected during the year	3108
--------------------------------------------------------	-------------

Line 2 - Non-household properties connected during the year

This refers to 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)

It is based on reconciled New Connections information extracted directly from Rapid (via CorVu), with an applied series of filters to identify New Connections. It is NIW policy to install meters on all New Connections.

Non-households properties connected during the year	106
------------------------------------------------------------	------------

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 used.

This is calculated from the monthly Rapid Property Summary for AIR14 (dated 31st March 2014).

Households Billed Unmeasured Sewerage	End March 2013	End March 2014
Household - Unmeasured	566,915	568,168
Household - Sewerage Only	6	6
Household - Measured – Not Charged (test meters)	294	288
Household - Measured	21,115	24,423
Household – Site Meters	432	438
Household - Unmeasured - Not Charged	1	0
Total	588,763	593,323
Average (Apr13/Apr14)	591,043	

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 AIR14 Table 7.

Households Billed Measured Sewerage	End March 2013	End March 2014
	0	0
Average (Apr13/Apr14)	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 13/14
Households billed unmeasured sewerage	591,043
Households billed measured sewerage	0
Total	591,043

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 2013 and End March 2014 non-domestic unmeasured properties.

Non-Households Billed Unmeasured Sewerage	End March 2013	End March 2014
	8916	8495
Average (Apr13/Apr14)	8706	

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 2013 and End March 2014 non-domestic measured sewerage properties.

Non-Households Billed Measured Sewerage	End March 2013	End March 2014
	23,151	23,543
Average (Apr13/Apr14)	23,347	

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 AIR14 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 13/14
Non-Households Billed Unmeasured Sewerage	8706
Non-Households Billed Measured Sewerage	23,347
Total	32,053

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 AIR14 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 2013	End March 2014
Household - Unmeasured	597,730	599,315
Household - Sewerage Only	6	6
Household – Measured - Not Charged (test meters)	299	295
Household - Measured	24,722	28,141
Household – Site Meters	520	525
Household - Unmeasured - Not Charged	1	0
Non-Household - Unmeasured	16,015	15,509
Non-Household – Sewerage only	19	18
Non-Household - Measured	25,902	26,125
Total	665,214	669,934
Average (Apr13/Apr14)	667,574	

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 within the AIR14 submission.

Voids	AIR14
Total Gross Properties (as above)	667,574
Less total occupied properties (line 5 [591043] + line 8 [32053])	623,096
Total	44,479

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 2013 and End March 2014.

	End March 2013	End March 2014	Average 2013/2014
Gross number of properties connected for sewerage	663014	667574	665294
Gross number of properties connected for water	721698 + 92466 = 814164 (T7 L7 + L11)	729182 + 92286 = 821468 (T7 L7 + L11)	817816
Calculation = Sewerage properties / Water Properties	= (665294 / 817816)*100 = 81.35%		81.35%

As detailed above, the number of sewerage properties has been calculated as 81.35% of those with water;

This percentage is then applied to the total water population from Table 7 Block C.

(Water population total X 81.35%) + Non-Resident Population = Table 13 line 10

(1,827,790 X 81.35%) + 28,018 = 1,486,907 + 28,018 = 1,514,925

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 14 NON FINANCIAL MEASURES

SEWAGE COLLECTED (TOTAL)

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2010-11	CG	2011-12	CG	2012-13	CG	2013-14	CG	
A SEWAGE - VOLUMES											
1	Volume unmeasured household sewage	MI/d	2	261.62	C3	246.17	A2	243.14	A2	232.74	B3
2	Volume unmeasured non-household sewage	MI/d	2	7.23	C3	6.10	A2	5.53	A2	4.89	B3
3	Volume unmeasured sewage	MI/d	2	268.85	C3	252.27	A2	248.67	A2	237.63	B3
4	Volume measured household domestic sewage	MI/d	2	0.00	A1	0.00	A1	0.00	A1	0.00	A1
5	Volume measured non - household domestic sewage	MI/d	2	39.16	B3	36.56	B3	35.9	B3	36.65	B3
6	Volume trade effluent (excluding Roads Drainage)	MI/d	2	20.18	B2	36.39	B2	34.12	B2	41.73	B2
7	Volume waste water returned	MI/d	2	328.19	C3	325.22	B3	318.69	B3	316.01	B3
8	Volume of Roads Drainage returned	MI/d	2	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 (MI/d)
- AIR Table 13 Line 3 – Households billed unmeasured sewage
- AIR Table 7 Line 3 – Households billed unmeasured water

Volume of unmeasured household sewage (MI/d) = AIR Table 10 Line 4 X 0.95 X $\frac{\text{AIR Table 13 Line 3}}{\text{AIR Table 7 Line 3}}$

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 AIR14 volume reported for unmeasured household sewage is 232.74 MI/d. The volume reported in AIR13 was 243.14 MI/d. Sewerage volumes are lower than last year due to the continued economic downturn.

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 (MI/d)
- AIR Table 13 Line 6 – Non-households billed unmeasured sewage
- AIR Table 7 Line 8 – Non-households billed unmeasured water

Volume of unmeasured Non-household sewage (MI/d) = AIR Table 10 Line 5 X 0.95 X $\frac{\text{AIR Table 13 Line 6}}{\text{AIR Table 7 Line 8}}$

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 AIR14 is 6.07 MI/d. The value reported in AIR13 was 6.87 MI/d.

The AIR14 volume reported for unmeasured non-household sewage is 4.89 MI/d. The volume reported in AIR13 was 5.53 MI/d. Sewerage volumes are lower than last year due to the continued economic downturn.

Line 5 - Volume measured non-household domestic sewerage

The reported sewerage figure was based on actual billed sewerage discharge April 13 to March 14. The discharge volumetric information was derived directly from;

- The monthly 'Reconciling' Reports Apr13-Mar14 - detailing actual billed sewerage discharge M³.
- The DRD Domestic Allowance Subsidy Assurance Report Apr13 – Mar14 – detailing actual domestic sewerage allowance applied per bills.
- Monthly FN12 Transaction Reports Apr13 – Mar14 – detailing Bad Debt Write-Off by Charge Type.

The calculated sewerage discharge volume was 13,378,013 M³ converted to mega litres per day of 36.65 MI/d.

Sewerage volume is 2% higher than last year due to;

- The exceptionally Warm Summer (June-July) increased water usage and in turn sewerage discharge.

This line has been allocated a confidence grade of B3 as it has an element of manual manipulation of raw data from Rapid report to derive the full year discharge M³.

Line 6 - Volume trade effluent

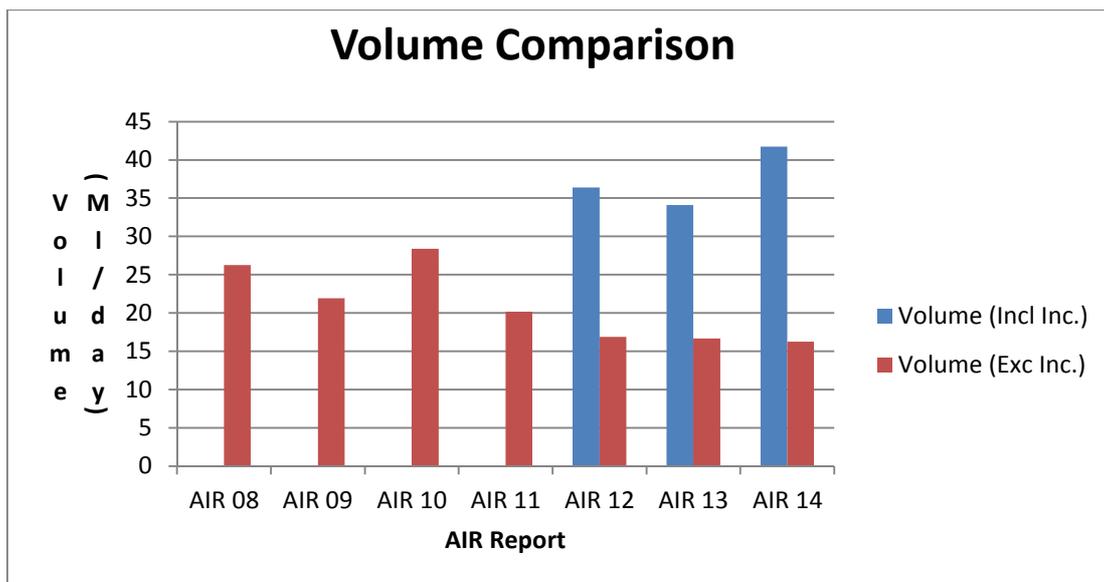
Sources

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 actual volume of each trader was supplied by our Billing Section in Metered Accounts Management. Where no volumes were available, then consented volumes were used. This applied to 72 traders, out of 507 assessed.

AIR 13 Volume = 34.12 MI/day

AIR 14 Volume = 41.73 MI/day

In order to analyse these figures it has been decided to break them down into volumes including Duncrue Incinerator and volumes without, to better identify the current trends in data.



There has been a significant increase in the reported discharge coming from Duncrue incinerator. This is due to the installation of accurate flow measurement on all discharge streams from the incinerator during 2013. Previously some outflow measurement had been used, as well as water mass balance calculations to attain a discharge volume. Reported discharge from the incinerator has increased from 17.433 Ml/day to 25.469Ml/day. This is an 8.036 Ml/day increase. Comparing the Total AIR Volumes there has been an increase of 7.61 Ml/day. Therefore the decrease in volume of 0.43 Ml/day has been brought about by the remaining trade effluent discharges.

There were increases to the discharge volumes in South Sampled and Charged NIW works, as well as the South Standard Charge PPP works and the North East Standard Charge PPP works. These summated to an increase of 0.53 ML/day. Below are some examples.

Trader	Area	AIR 13 Vol/day (m3)	AIR 14 Vol/Day (m3)	Increase (m3)
Moypark Dungannon	S NIW S&C	1347.81	1630.03	282.22
Dunbia SP1	S NIW S&C	17.12	41.53	24.41
Dunbia SP2	S NIW S&C	276.37	302.18	25.81
Moypark Seagoe	S PPP S&C	570.61	758.92	188.31

There were reductions across the remaining trade areas which summated to a decrease of 0.96 Ml/day. Some of the major changes making up this reduction are detailed below:

Trader	Area	AIR 13 Vol/day (m3)	AIR 14 Vol/Day (m3)	Reduction (m3)
Crossgar Poultry	NE NIW S&C	120.00	1.49	118.51
Mash Direct	NE PPP S&C	150	0	150.00
Thales Air Defence	NE PPP S&C	120	3.48	116.52
Culmore Landfill	NW NIW S&C	85	0	85.00
Granville Eco Park	S NIW S&C	300	0	300
Pritchitt Foods	NE PPP S&C	825.41	795.61	29.8

Mash Direct, Culmore Landfill Site and Granville Eco Park did not discharge during this period and have therefore been removed from the report. In previous years if a site was consented but not discharging the consented volume was used. For AIR 14 only collected volumes of Trade effluent have been included. In AIR 13 consented volumes had to be used for Crossgar Poultry and Thales Air Defence, due to zero volumes being returned

from the Billing Section. For AIR 14 water consumption figures minus staff allowances were used to generate a daily discharge volume for these traders.

The net of these increases and decreases works out at a reduction of 0.43 Ml/day. Some of the more significant changes have been highlighted above, but the fluctuations of all the trade effluent discharges contribute to 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.
 - $56,287,473 \times 1.14 = 64,167,719\text{m}^3$ (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		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2010-11	CG	2011-12	CG	2012-13	CG	2013-14	CG	
A SEWAGE - LOADS											
1	Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1	2,783.3	B2	4,255.6	B2	3,778.6	B2	3,880.2	B2
2	Total load receiving secondary treatment (BOD/year)	tonnes	1	38,541.8	C3	38,366.4	C3	39,183.9	C3	39,160.6	C3
3	Total load receiving primary treatment only (BOD/year)	tonnes	1	184.1	C3	193.9	C3	286.6	C3	273.9	C3
4	Total load receiving preliminary treatment only (BOD/year)	tonnes	1	553.5	C3	668.4	C3	691.5	C3	634.4	C3
5	Total load entering sewerage system (BOD/year)	tonnes	1	39,680.5	C5	39,504.1	C5	40,312.8	C5	40,213.4	C5
6	Equivalent population served (resident)	000	2	1,778.08	C5	1,769.98	C5	1,806.82	C5	1,802.63	C5
7	Equivalent population served (resident) (numerical consents)	000	2	1,718.57	C5	1,708.58	C5	1,742.90	C5	1,740.19	C5
B SEWERAGE - SERVICE FACILITIES											
8	Number of sewage treatment works	nr	0	1,028	A2	1,023	A2	1,018	A2	1,015	A2
9	Treatment capacity available (BOD5/day)	tonnes	1	127.0	D3	129.2	D3	132.4	D3	133.4	D3
C SEWAGE - SLUDGE DISPOSAL											
14	Percentage unsatisfactory sludge disposal	%	2	0.00	A1	0.00	A1	0.00	A1	0.00	A1
15	Total sewage sludge produced	ttds	1	30.5	B2	31.4	B2	32	B2	32.5	B2
16	Total sewage sludge transferred to PPP	ttds	1	29.9	B2	30.7	A2	31.3	A2	31.7	A2
17	Total sewage sludge disposal by NI Water	ttds	1	0.6	B2	0.7	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		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2010-11	CG	2011-12	CG	2012-13	CG	2013-14	CG	
A SEWAGE - LOADS											
1	Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1	1,058.1	B2	1,124.6	B2	1,040.6	B2	1,082.3	B2
2	Total load receiving secondary treatment (BOD/year)	tonnes	1	7,396.5	B3	7,834.5	B3	6,594.9	B3	7,209.1	B3
3	Total load receiving primary treatment only (BOD/year)	tonnes	1	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
5	Total load entering sewerage system (BOD/year)	tonnes	1	7,396.5	B3	7,834.5	C5	6,594.9	C5	7,209.1	C5
6	Equivalent population served (resident)	000	2	337.74	B3	356.76	B2	301.14	B2	329.18	B3
7	Equivalent population served (resident) (numerical consents)	000	2	337.74	B3	356.76	B2	301.14	B2	329.18	B3
B SEWERAGE - SERVICE FACILITIES											
8	Number of sewage treatment works	nr	0	6	A1	6	A1	6	A1	6	A1
9	Treatment capacity available (BOD5/day)	tonnes	1	30.4	B3	30.4	B3	30.4	B3	30.4	A2
C SEWAGE - SLUDGE DISPOSAL											
14	Percentage unsatisfactory sludge disposal	%	2	0.00	A2	0.00	A1	0.00	A2	0.00	A1
15	Total sewage sludge produced	ttds	1	7.6	B3	7.6	B3	6.3	B2	6.4	A2
16	Total sewage sludge received from NI Water	ttds	1	29.9	B3	30.7	A2	31.3	A2	31.7	A2
17	Total sewage sludge disposal	ttds	1	37.5	B3	38.3	B2	37.6	B2	38.1	A2

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 15 NON FINANCIAL MEASURES

SEWAGE TREATMENT (Total)

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2010-11	CG	2011-12	CG	2012-13	CG	2013-14	CG	
A SEWAGE - LOADS											
1	Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1	3,841.4	B2	5,380.2	B2	4,819.2	B2	4,962.6	B2
2	Total load receiving secondary treatment (BOD/year)	tonnes	1	45,938.3	C3	46,200.9	C3	45,778.8	C3	46,369.7	C3
3	Total load receiving primary treatment only (BOD/year)	tonnes	1	184.1	C3	193.9	C3	286.6	C3	273.9	C3
4	Total load receiving preliminary treatment only (BOD/year)	tonnes	1	553.5	C3	668.4	C3	691.5	C3	634.4	C3
5	Total load entering sewerage system (BOD/year)	tonnes	1	47,076.9	C5	47,338.6	C5	46,907.7	C5	47,422.5	C5
6	Equivalent population served (resident)	000	2	2,115.82	C5	2,126.74	C5	2,107.96	C5	2,131.81	C5
7	Equivalent population served (resident) (numerical consents)	000	2	2,056.31	C5	2,065.34	C5	2,044.04	C5	2,069.37	C5
B SEWERAGE - SERVICE FACILITIES											
8	Number of sewage treatment works	nr	0	1034	A2	1,029	A2	1,024	A2	1,021	A2
9	Treatment capacity available (BOD5/day)	tonnes	1	157.4	D3	159.6	D3	162.8	D3	163.8	D3
C SEWAGE - SLUDGE DISPOSAL											
14	Percentage unsatisfactory sludge disposal	%	2	0.00	A2	0.00	A1	0.00	A2	0.00	A1
15	Total sewage sludge produced	ttds	1	38.1	B3	39.0	B2	38.4	B2	38.9	A2
16	Not used	ttds	1								
17	Total sewage sludge disposal	ttds	1	38.1	B3	39.0	B2	38.4	B3	38.9	A2

Table 15 - Sewage Treatment

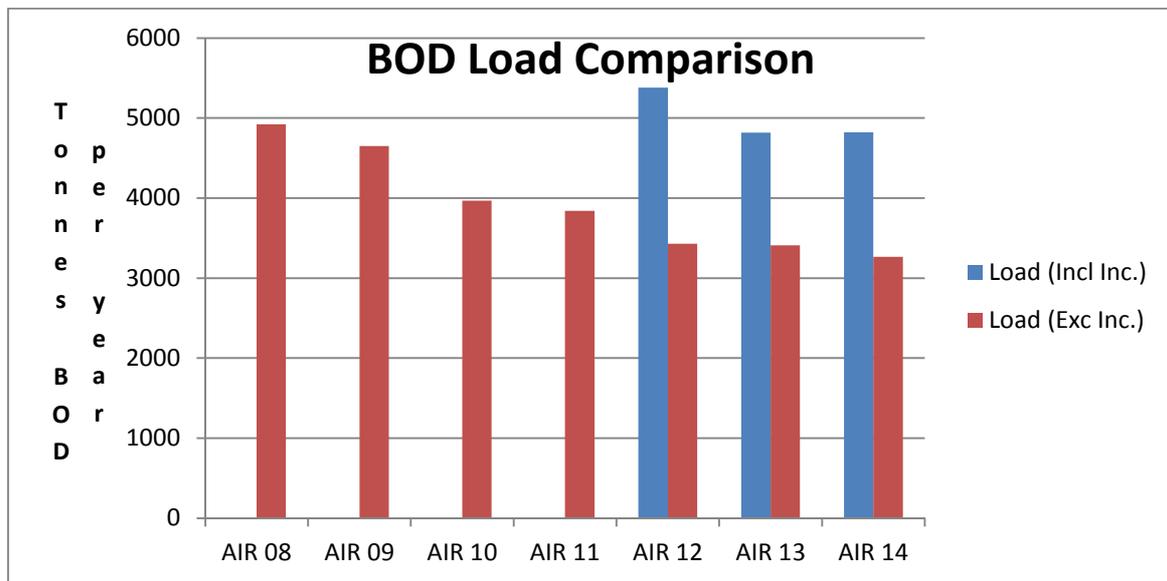
Line 1- Trade effluent load receiving secondary treatment

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 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 Methodology.

The loading for this year's and the previous year's reports were as follows:

AIR14 = 4962.6 tonnes/year
AIR13 = 4819.2 tonnes/year.

In order to analyse these figures it has been decided to break them down into loading including Duncrue Incinerator and loading without, to better identify the current trends in data.



The loading from the incinerator has increased from 1410.848 tonnes/yr (AIR13) to 1557.11 tonnes/yr (AIR14), which is an increase of 146.3 tonnes/yr. Overall AIR 14 identified an increase in 143.4 tonnes/year. With the increase from the incinerator removed from this figure, the difference between the two reports is a reduction of 2.9 tonnes/yr.

There has been an increase to the loadings from all the standard charge traders due to an increase in the BOD strength that was used for the report. This increased from 189 mg/l to 229 mg/l. This was due to the average results of Mogden samples collected during 2013 being used instead of a 5 year average, as was used for AIR 13. There were also increased loadings reported in the South Sampled and Charge for NIW and PPP works. The total of the combined increases in AIR 14 equated to 562.4 tonnes/year

There were reductions in loadings across North East Sampled and Charged Traders for NIW and PPP works, as well as a reduction in North West Sampled and Charged Traders for NIW works. The total of these reductions was 565.3 tonnes/year and included:

Trader	Area	AIR 13 Tonnes/yr	AIR 14 Tonnes/yr	Reduction (tonnes/yr)
[REDACTED]	NE PPP S&C	88.3	removed	88.3
[REDACTED]	NW NIW S&C	348.49	150.45	198.04
[REDACTED]	NW NIW S&C	189.82	143.25	46.57
[REDACTED]	NE NIW S&C	61.8	removed	61.8
[REDACTED]	NE NIW S&C	92.6	45.8	46.8

The changes in South Sampled and Charged NIW works and North West NIW works can somewhat be attributed to the changes in areas of responsibility, with Omagh traders moving from the North West to South. This equated to an additional loading of 171.41 tonnes/year for the South Sampled and Charged area. More examples of increased loadings can be attributed to:

Trader	Area	AIR 13 Tonnes/yr	AIR 14 Tonnes/yr	Increase(tonnes/yr)
[REDACTED]	S NIW S&C	387.66	547.37	159.71
[REDACTED]	S NIW S&C	73.74	101.13	27.39
[REDACTED]	S NIW S&C	31.8	45.63	13.83
[REDACTED]	S PPP S&C	172.24	469.8	297.56

In summary, there has been an increase in the loading from Duncrue Incinerator, whilst there have been increases and decreases of loading through all areas. Overall this equates to a small change in the total loading.

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 AIR14, PEs for 152 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 AIR13, 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 AIR14 these have been removed from the Trade Effluent Submission. For the majority of hospitals 5% of hospital discharges has been included due to discharges from

x-ray departments and bathing pools. The exceptions are [REDACTED] where 7% and 32.6% respectively of hospital discharges have been included. Also it was highlighted that [REDACTED] trade figure is based on 5% of total discharge plus an additional 100m³/day for laundry volume. The AIR11 Trade Information, for nursing homes and clinics, has been maintained for AIR14 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 AIR14 with the latest trade information giving a new figure of 370,779 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 two main projects involved are:

- 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 AIR15.

NIW has information pertaining to septic tank imports to its WWTWs. In summary of the 16 WWTWs that are septic tank imports centres four receive the sludge at the head of the inlet works and the remaining 12 receive it via sludge reception centres.

For AIR14 conversion factors, received from our scientific staff, were used to convert the septic tank imports to PEs for the 4 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. It was reported in AIR13 that as part of an on-going meter calibration exercise for the flow & load studies it was planned that the supernatant return meters would be checked for accuracy and calibrated if necessary at the 12 WWTWs. However as yet this work has not taken place. It is envisaged that this work will begin within the next 6 months.

The WWTWs where this sludge was discharged at the head of the works were 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

NIW CAR Name	Site Car Id	Total Volume m ³ /Yr	PE Calculation			
			Total Volume m ³ /day	SS Loading (Assume 1% Dry Solids) m ³ /day	SS Loading kg/day	PE (SS/0.06)
Belfast	345	771.222	2.11	0.02	21.13	352
Glenstall	1109	7532.904	20.64	0.21	206.38	3440
Limavady	3162	38.957	0.11	0.00	1.07	18

Lisburn (New Holland)	329	6062.814	16.61	0.17	166.10	2768
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NIW has also information pertaining to Sludge Imports to its WWTWs. 14 have received sludge imports during the AIR14 period, with 1 being used as sludge holding centre, i.e. supernatant is not decanted off the holding tanks.

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 as 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 a particular WWTW due to population commuting out of 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 '000 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	000 tonnes of BOD per annum
Residential	1249442	27362.78
Non-Residential	225840	4945.90
Hotels	3741	81.93
Nursery School	1012	22.17
Playschool	1044	22.87
Primary School	27379	599.61
Secondary School	24576	538.21
Trade PE	128955	2824.11
Large (>7500m3) Consumers	120929	2648.35
Caravan Parks	29577	647.74
Sludge Import / Export	23733	519.75
Total (Line 5)	1836228	40213.42

Confidence Grades

The confidence grades of the data in lines 2 - 4 remain as C3, as although the PE confidence has been C5 there is greater confidence in process categories for the WWTWs.

The confidence grades of the data in lines 5–7 remain as stated in AIR13, as a result of the work carried out with Jacobs (during 2008) who developed a Growth Model for NIW, in line with the model they developed for Scottish Water. Through consultations with Jacobs and their understanding of the theoretical methodology used by both NIW and Jacobs staff

during the previous year, their informed opinion was that the PEs could warrant only a C5 grading. NIW recognises the need to improve these PE grades through targeted flow and load surveys, and analysis of outputs from same with theoretical PE results through the Flow & Load Survey Group.

This group has been established to discuss and agree on the outputs from flow & load surveys carried out to date and those to be carried out in the future. This group recommended the adoption of 1 flow & load study and this has been included in the AIR14 PE information.

The confidence grades for the actual loadings at 57 WWTWs (reviewed by the Flow & Load Survey Group) could in effect be increased from a C5 to a B4 due to the extent of analysis work which has been carried out. However this increase will not affect any of the overall confidence grades in Table 17d as the proportion of the 57 works to the overall number of works in each line is too small.

The confidence grades of the data in lines 8 and 9 remain as in AIR13, due to the confidence in the other information associated with the population of these lines.

The Reporter recommends that NI Water considers increasing the confidence grades for lines 5 – 7 from C5 to C3. NI Water understands the Reporter's position but would wish to maintain the C5 grade for these lines on the basis of the recommendation offered by Jacobs who were involved in the updating of the WWTWs PEs, and as these lines refer only to PE information. Other lines such as 2 and 3 (within this Table 15) and Table 17d lines have been assigned a C3 confidence grade as these lines refer to loads (based on PEs) receiving a certain level of treatment, and NI Water has a greater confidence in the WWTW process categories. NI Water's preference is to maintain these confidence grades until further Flow and Load Surveys are carried out and outputs from the ongoing installation of flow measurement equipment is analysed and understood.

The Reporter also recommends that NI Water considers increasing the confidence grade for PPP Works (line 5) from C5 to B2. However NI Water has assigned C5 to recognise the fact that this line refers to the load entering the sewerage system, and hence the inherent unknowns, rather than the load received at the works.

Line 2 - Total load receiving secondary treatment

The table below shows the changes in WWTWs receiving secondary treatment since AIR13 for Line 2. NB. Change in PE (-Ve AIR14 PE Higher).

Name of Works	CAR ID	PE Change	Comments
Annsborough	S02687	-90	The PE for this site has been updated with the latest Trade Information for AIR14
Antrim (WWTW)	S01422	293	The PE for this site has been updated with the latest Trade Information for AIR14
Ardstraw (WWTW)	S02997	-34	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Arney (WWTW)	S02999	-38	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Augher (WWTW)	S03005	212	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Aughil (WWTW)	S03006	109	This WWTWs is now a pumpaway for AIR14
Aughnacloy	S03007	286	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Ballee Road (75-83)	S04091	2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballybogy	S01087	71	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballycarry	S00267	-77	The PE for this site has been updated with the latest Trade Information for AIR14
Ballyclare	S01467	-262	The PE for this site has been updated with the latest Trade Information for AIR14
Ballycranbeg	S00218	87	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballygawley (WWTW)	S03013	249	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballygowan	S00247	-10	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballykelly (L/Derry)	S03016	1209	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Ballykinler (WWTW)	S00299	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Ballymena (WWTW)	S01456	7951	The PE for this site has been updated with the latest Trade Information for AIR14
Ballynahinch (Down)	S00311	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Banbridge (WWTW)	S02102	85	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Bankside Shinn	S02692	-11	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Belfast (WWTW)	S00345	-5779	The PE for this site has been updated with the latest Trade Information for AIR14

Name of Works	CAR ID	PE Change	Comments
Belleek (Fermanagh)	S03024	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Benone (WWTW)	S03026	3347	This WWTWs has been decommissioned for AIR14
Bolea (WWTW)	S03030	-20	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Bonnanaboigh	S03031	36	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Bready (WWTW)	S03971	4	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Cabragh (WWTW)	S02834	-2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Carrickfergus (WWTW)	S00261	-16	The PE for this site has been updated with the latest Trade Information for AIR14
Carrowdore	S00236	-386	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Castle Archdale (WWTW)	S03041	-40	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Castledearg (WWTW)	S03042	927	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Charlestown	S02399	-26	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Clady (Tyrone)	S04149	1	The PE for this site has been updated with the latest Trade Information for AIR14
Clogher (WWTW)	S03056	110	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Coalisland	S02828	-137	The PE for this site has been updated with the latest Trade Information for AIR14
Cookstown (WWTW)	S01582	188	The PE for this site has been updated with the latest Trade Information for AIR14
Culcrow	S01146	-16	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Culmore (WWTW)	S03071	2144	The PE for this site has been updated with the latest Trade Information for AIR14

Name of Works	CAR ID	PE Change	Comments
Darkley (WWTW)	S02569	-70	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dernaflaw	S03072	-47	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Derryhale	S02570	-7	The PE for this site has been updated with the latest Trade Information for AIR14
Dervock (WWTW)	S01102	-19	The PE for this site has been updated with the latest Trade Information for AIR14
Donaghmore (WWTW)	S02840	-42	The PE for this site has been updated with the latest Trade Information for AIR14
Donemana	S03103	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Donnybrewer	S03080	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Downpatrick (WWTW)	S00771	88	The PE for this site has been updated with the latest Trade Information for AIR14
Draperstown	S01615	12	The PE for this site has been updated with the latest Trade Information for AIR14
Dromara (WWTW)	S00316	1	The PE for this site has been updated with the latest Trade Information for AIR14
Dromore (Down)	S02127	-29	The PE for this site has been updated with the latest Trade Information for AIR14
Drumaness (WWTW)	S00293	189	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Drumilly	S02268	7	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Drumlough	S00320	-1	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dundrum (Down)	S00297	939	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dungannon	S02850	-5894	The PE for this site has been updated with the latest Trade Information for AIR14
Dungiven	S03101	16	The PE for this site has been updated with the latest Trade Information for AIR14
Dunmullan	S03102	-5	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dunmurry	S00346	-570	The PE for this site has been updated with the latest Trade Information for AIR14
Edenderry (Tyrone)	S03104	3	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Ederney (WWTW)	S03106	-35	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Enniskillen	S03218	1560	The PE for this site has been updated with the latest Trade Information for AIR14
Ferris Bay (50)	S04084	4	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Fincarn	S03111	-2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Fivemiletown (WWTW)	S03113	54	The PE for this site has been updated with the latest Trade Information for AIR14
Garrison (WWTW)	S03115	38	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Glenstall	S01109	-591	The PE for this site has been updated with the latest Trade Information for AIR14
Gortaclady (WWTW)	S01575	-1	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Greenisland (WWTW)	S00263	-10	The PE for this site has been updated with the latest Trade Information for AIR14
Greysteel (WWTW)	S03123	-4	The PE for this site has been updated with the latest Trade Information for AIR14
Hilltown (WWTW)	S02701	-27	The PE for this site has been updated with the latest Trade Information for AIR14
Katesbridge	S02136	6	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Keady (Armagh)	S02553	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Kesh (WWTW)	S03140	-4	The PE for this site has been updated with the latest Trade Information for AIR14
Kilkeel (WWTW)	S00313	-1750	A Flow & Load study was carried out for this site and PE adopted for AIR14
Killeen (Armagh)	S02294	-9	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Killeter (WWTW)	S03144	36	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Killinchy (WWTW)	S00252	2448	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14

Name of Works	CAR ID	PE Change	Comments
Killygonlan (WWTW)	S02043	-165	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Killyleagh (WWTW)	S00273	844	The PE for this site has been updated with the latest Trade Information for AIR14
Kilmore (Down)	S00285	23	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Kilrea	S01156	221	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Kilross	S01622	2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Kilskeery	S03148	13	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Larne (WWTW)	S02044	4905	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Legacurry (Down)	S00321	-34	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Limavady (WWTW)	S03162	-17	The PE for this site has been updated with the latest Trade Information for AIR14
Lisburn (New Holland)	S00329	1182	The PE for this site has been updated with the latest Trade Information for AIR14
Lisnadill (WWTW)	S02586	1	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Lisnaskea (WWTW)	S03171	1	The PE for this site has been updated with the latest Trade Information for AIR14
Longs Glebe	S01160	23	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Loughries	S00230	-18	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Macosquin	S01161	41	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Maghera (L/Derry)	S01629	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Magherafelt (WWTW)	S01621	-157	The PE for this site has been updated with the latest Trade Information for AIR14

Name of Works	CAR ID	PE Change	Comments
Magilligan Point Road WWTW	S05593	-5674	This WWTWs is a new site for AIR14 and replaces Benone, Drumavalley and Augil
Markethill	S02591	-3	The PE for this site has been updated with the latest Trade Information for AIR14
McCandless Terrace	S02150	3	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
McKinley Park	S02276	-9	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Meigh (WWTW)	S02277	-74	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Milltown (Aghory)	S02593	58	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moira	S02429	-59	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Monea (WWTW)	S03186	67	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moneydig	S01167	1	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moneymore (WWTW)	S01589	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Moneyreagh (WWTW)	S00337	-6	The PE for this site has been updated with the latest Trade Information for AIR14
Moneyscalp	S02710	-2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moneyslane (WWTW)	S02151	-47	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Mountfield (WWTW)	S03192	42	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Mountnorris	S02248	109	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moy (WWTW)	S02859	-248	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14

Name of Works	CAR ID	PE Change	Comments
Newcastle (WWTW)	S00303	-8	The PE for this site has been updated with the latest Trade Information for AIR14
Newry (WWTW)	S02685	-1130	The PE for this site has been updated with the latest Trade Information for AIR14
Newtownbreda (WWTW)	S00342	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Newtownbutler (WWTW)	S03200	446	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Newtownstewart (WWTW)	S03202	2	The PE for this site has been updated with the latest Trade Information for AIR14
North Coast (WWTWs)	S04150	-1296	The PE for this site has been updated with the latest Trade Information for AIR14
Omagh (WWTW)	S03999	-1207	The PE for this site has been updated with the latest Trade Information for AIR14
Poyntzspass (WWTW)	S02156	-3	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Priestland	S01169	13	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Rathlin Island (New) WWTW	S05624	-117	This WWTWs is a new site for AIR14 replacing the old Rathlin WWTWs
Robinsonstown	S02419	49	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Roughfort (WWTW)	S01470	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Seahill (WWTW)	S00774	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Stewartstown	S01599	-256	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Stoneyford (WWTW)	S00328	-15	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Strabane	S03223	-386	The PE for this site has been updated with the latest Trade Information for AIR14
Straid (Ballymena)	S01455	2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Tamnamore (WWTW)	S02862	-15	The PE for this site has been updated with the latest Trade Information for AIR14
Tandragee	S02174	-1868	The PE for this site has been updated with the latest Trade Information for AIR14
The Oyster Yard WWTW	S05533	15	Actual PE from this site updated following an On-Site house count by APT

Name of Works	CAR ID	PE Change	Comments
Thorney Glen	S00284	-8	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Trench Road (66-70)	S04118	-2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Trillick (WWTW)	S03231	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Tullyroan	S02600	24	The PE for this site has been updated with the latest Trade Information for AIR14
Victoria Bridge (WWTW)	S03236	58	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Waringsford	S02166	-18	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Waringstown	S02423	-897	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Warrenpoint (WWTW)	S02720	-16	The PE for this site has been updated with the latest Trade Information for AIR14
Whitehouse	S00265	44	The PE for this site has been updated with the latest Trade Information for AIR14
Total		1063	Change in Line 2 PE since AIR13

The change in PE equates to an increase in load of 23.28 t BOD/yr (i.e. 1063 x 60 for 60g/hd/day /1000/1000 x 365) from AIR13 to AIR14.

Difference between AIR14 and AIR13:

Line 2 for AIR13 -	39183.88
Line 2 for AIR 14 -	39160.58
Total Difference -	23.3

Line 3 - Total load receiving primary treatment only

The table below shows the changes in WWTWs receiving primary treatment only since AIR13 for Line 3. NB. Change in PE (-Ve AIR14 PE Higher).

Name of Works	CAR ID	PE Change	Comments
Ardglass (WWTW)	S00268	2	The PE for this site has been updated with the latest Trade Information for AIR14
Diamond cottages(1)	S01772	-13	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Drumavally	S03087	608	This WWTWs is now a pumpaway to the new Magilligan WWTWs
Kilcarn Road(7-9)	S00250	6	This WWTWs has been ben re-designated as a private WWTWs for AIR14

Name of Works	CAR ID	PE Change	Comments
Killough (Retention Tank)	S00275	-66	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moss Road(36-38)	S00853	3	This WWTWs has been ben re-designated as a private WWTWs for AIR14
Mountain View (Drumintee)	S02278	42	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
	Total	582	Change in Line 3 PE since AIR13

The change in PE equates to an increase in load of 12.75 t BOD/yr (i.e. 582 x 60 for 60g/hd/day /1000/1000 x 365) from AIR13 to AIR14, allowing for rounding up and down and conversions.

Difference between AIR14 and AIR13:

Line 3 for AIR13 -	286.63
Line 3 for AIR 14 -	273.89
Total Difference -	12.74

Line 4 - Total load receiving preliminary treatment only

The table below shows the changes in WWTWs receiving preliminary only since AIR13 for Line 4. NB. Change in PE (-Ve AIR14 PE Higher).

Name of Works	CAR ID	PE Change	Comments
Ballycastle (WWTW)	S01071	2832	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Cranfield (Down)	S02721	-225	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
	Total	2607	Change in Line 4 PE since AIR13

The change in PE equates to an increase in load of 57.09 t BOD/yr (i.e. 2607 x 60 for 60g/hd/day /1000/1000 x 365) from AIR13 to AIR14, allowing for rounding up and down and conversions.

Difference between AIR14 and AIR13:

Line 4 for AIR13 -	691.49
Line 4 for AIR 14 -	634.40
Total Difference -	57.09

Line 5 - Total load entering sewerage system

The table below shows the changes in WWTWs since AIR13 that affects load entering the system for Line 5. NB. Change in PE (-Ve AIR14 PE Higher).

Name of Works	CAR ID	PE Change	Comments
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Name of Works	CAR ID	PE Change	Comments
Annalong (WWTW)	S00300	107	The PE for this site has been updated with the latest Trade Information for AIR14
Annsborough	S02687	-90	The PE for this site has been updated with the latest Trade Information for AIR14
Antrim (WWTW)	S01422	293	The PE for this site has been updated with the latest Trade Information for AIR14
Ardglass (WWTW)	S00268	2	The PE for this site has been updated with the latest Trade Information for AIR14
Ardstraw (WWTW)	S02997	-34	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Arney (WWTW)	S02999	-38	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Augher (WWTW)	S03005	212	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Aughil (WWTW)	S03006	109	This WWTWs is now a pumpaway for AIR14
Aughnacloy	S03007	286	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Ballee Road (75-83)	S04091	2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballintoy (Retention Tank)	S01174	28	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballybogy	S01087	71	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballycarry	S00267	-77	The PE for this site has been updated with the latest Trade Information for AIR14
Ballycastle (WWTW)	S01071	2832	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballyclare	S01467	-262	The PE for this site has been updated with the latest Trade Information for AIR14
Ballycranbeg	S00218	87	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballygawley (WWTW)	S03013	249	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Ballygowan	S00247	-10	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballykelly (L/Derry)	S03016	1209	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Ballykinler (WWTW)	S00299	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Ballymena (WWTW)	S01456	7951	The PE for this site has been updated with the latest Trade Information for AIR14
Ballynahinch (Down)	S00311	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Ballywhiskin (Retention Tank)	S00827	-9	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Banbridge (WWTW)	S02102	85	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Bankside Shinn	S02692	-11	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Belfast (WWTW)	S00345	-5779	The PE for this site has been updated with the latest Trade Information for AIR14
Belleek (Fermanagh)	S03024	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Benone (WWTW)	S03026	3347	This WWTWs has been decommissioned for AIR14
Bolea (WWTW)	S03030	-20	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Bonnanaboigh	S03031	36	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Bready (WWTW)	S03971	4	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Cabragh (WWTW)	S02834	-2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Carrickfergus (WWTW)	S00261	-16	The PE for this site has been updated with the latest Trade Information for AIR14

Name of Works	CAR ID	PE Change	Comments
Carrowdore	S00236	-386	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Castle Archdale (WWTW)	S03041	-40	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Castleberg (WWTW)	S03042	927	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Charlestown	S02399	-26	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Clady (Tyrone)	S04149	1	The PE for this site has been updated with the latest Trade Information for AIR14
Clogher (WWTW)	S03056	110	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Coalisland	S02828	-137	The PE for this site has been updated with the latest Trade Information for AIR14
Cookstown (WWTW)	S01582	188	The PE for this site has been updated with the latest Trade Information for AIR14
Cranfield (Down)	S02721	-225	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Culcrow	S01146	-16	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Culmore (WWTW)	S03071	2144	The PE for this site has been updated with the latest Trade Information for AIR14
Darkley (WWTW)	S02569	-70	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dernaflaw	S03072	-47	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Derryhale	S02570	-7	The PE for this site has been updated with the latest Trade Information for AIR14
Dervock (WWTW)	S01102	-19	The PE for this site has been updated with the latest Trade Information for AIR14
Diamond cottages(1)	S01772	-13	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Donaghmore (WWTW)	S02840	-42	The PE for this site has been updated with the latest Trade Information for AIR14
Donemana	S03103	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Donnybrewer	S03080	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Downpatrick (WWTW)	S00771	88	The PE for this site has been updated with the latest Trade Information for AIR14
Draperstown	S01615	12	The PE for this site has been updated with the latest Trade Information for AIR14
Dromara (WWTW)	S00316	1	The PE for this site has been updated with the latest Trade Information for AIR14
Dromore (Down)	S02127	-29	The PE for this site has been updated with the latest Trade Information for AIR14
Drumaness (WWTW)	S00293	189	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Drumavally	S03087	608	This WWTWs is now a pumpaway to the new Magilligan WWTWs
Drumilly	S02268	7	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Drumlough	S00320	-1	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dundrum (Down)	S00297	939	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dungannon	S02850	-5894	The PE for this site has been updated with the latest Trade Information for AIR14
Dungiven	S03101	16	The PE for this site has been updated with the latest Trade Information for AIR14
Dunmullan	S03102	-5	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dunmurry	S00346	-570	The PE for this site has been updated with the latest Trade Information for AIR14
Dunserverick (Retention Tank)	S01185	39	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Edenderry (Tyrone)	S03104	3	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ederney (WWTW)	S03106	-35	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Enniskillen	S03218	1560	The PE for this site has been updated with the latest Trade Information for AIR14
Ferris Bay (50)	S04084	4	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Fincarn	S03111	-2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Fivemiletown (WWTW)	S03113	54	The PE for this site has been updated with the latest Trade Information for AIR14
Garrison (WWTW)	S03115	38	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Glenstall	S01109	-591	The PE for this site has been updated with the latest Trade Information for AIR14
Gortaclady (WWTW)	S01575	-1	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Greenisland (WWTW)	S00263	-10	The PE for this site has been updated with the latest Trade Information for AIR14
Greysteel (WWTW)	S03123	-4	The PE for this site has been updated with the latest Trade Information for AIR14
Hilltown (WWTW)	S02701	-27	The PE for this site has been updated with the latest Trade Information for AIR14
Katesbridge	S02136	6	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Keady (Armagh)	S02553	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Kesh (WWTW)	S03140	-4	The PE for this site has been updated with the latest Trade Information for AIR14
Kilcarn Road(7-9)	S00250	6	This WWTWs has been ben re-designated as a private WWTWs for Alr14
Kilkeel (WWTW)	S00313	-1750	A Flow & Load study was carried out for this site and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Killeen (Armagh)	S02294	-9	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Killeter (WWTW)	S03144	36	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Killinchy (WWTW)	S00252	2448	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Killough (Retention Tank)	S00275	-66	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Killygonlan (WWTW)	S02043	-165	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Killyleagh (WWTW)	S00273	844	The PE for this site has been updated with the latest Trade Information for AIR14
Kilmore (Down)	S00285	23	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Kilrea	S01156	221	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Kilross	S01622	2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Kilskeery	S03148	13	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Larne (WWTW)	S02044	4905	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Legacurry (Down)	S00321	-34	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Limavady (WWTW)	S03162	-17	The PE for this site has been updated with the latest Trade Information for AIR14
Lisburn (New Holland)	S00329	1182	The PE for this site has been updated with the latest Trade Information for AIR14
Lisnadill (WWTW)	S02586	1	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Lisnaskea (WWTW)	S03171	1	The PE for this site has been updated with the latest Trade Information for AIR14
Longs Glebe	S01160	23	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Loughries	S00230	-18	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Macosquin	S01161	41	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Maghera (L/Derry)	S01629	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Magherafelt (WWTW)	S01621	-157	The PE for this site has been updated with the latest Trade Information for AIR14
Magilligan Point Road WWTW	S05593	-5674	This WWTWs is a new site for AIR14 and replaces Benone, Drumavally and Augil
Markethill	S02591	-3	The PE for this site has been updated with the latest Trade Information for AIR14
McCandless Terrace	S02150	3	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
McKinley Park	S02276	-9	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Meigh (WWTW)	S02277	-74	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Milltown (Aghory)	S02593	58	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moira	S02429	-59	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Monea (WWTW)	S03186	67	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moneydig	S01167	1	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moneymore (WWTW)	S01589	-1	The PE for this site has been updated with the latest Trade Information for AIR14

Name of Works	CAR ID	PE Change	Comments
Moneyreagh (WWTW)	S00337	-6	The PE for this site has been updated with the latest Trade Information for AIR14
Moneyscalp	S02710	-2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moneyslane (WWTW)	S02151	-47	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moss Road(36-38)	S00853	3	This WWTWs has been ben re-designated as a private WWTWs for Air14
Mountain View (Drumintee)	S02278	42	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Mountfield (WWTW)	S03192	42	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Mountnorris	S02248	109	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moy (WWTW)	S02859	-248	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Newcastle (WWTW)	S00303	-8	The PE for this site has been updated with the latest Trade Information for AIR14
Newry (WWTW)	S02685	-1130	The PE for this site has been updated with the latest Trade Information for AIR14
Newtownbreda (WWTW)	S00342	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Newtownbutler (WWTW)	S03200	446	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Newtownstewart (WWTW)	S03202	2	The PE for this site has been updated with the latest Trade Information for AIR14
North Coast (WWTWs)	S04150	-1296	The PE for this site has been updated with the latest Trade Information for AIR14
Omagh (WWTW)	S03999	-1207	The PE for this site has been updated with the latest Trade Information for AIR14
Poyntzspass (WWTW)	S02156	-3	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Priestland	S01169	13	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Rathlin (Retention Tank)	S00902	117	This WWTWs has been replaced by Rathlin New (WWTWs)
Rathlin Island (New) WWTW	S05624	-117	This WWTWs is a new site for AIR14 replacing the old Rathlin WWTWs
Robinsonstown	S02419	49	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Roughfort (WWTW)	S01470	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Seahill (WWTW)	S00774	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Stewartstown	S01599	-256	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Stoneyford (WWTW)	S00328	-15	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Strabane	S03223	-386	The PE for this site has been updated with the latest Trade Information for AIR14
Straid (Ballymena)	S01455	2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Tamnamore (WWTW)	S02862	-15	The PE for this site has been updated with the latest Trade Information for AIR14
Tandragee	S02174	-1868	The PE for this site has been updated with the latest Trade Information for AIR14
The Oyster Yard WWTW	S05533	15	Actual PE from this site updated following an On-Site house count by APT
Thorney Glen	S00284	-8	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Trench Road (66-70)	S04118	-2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Trillick (WWTW)	S03231	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Tullyroan	S02600	24	The PE for this site has been updated with the latest Trade Information for AIR14

Name of Works	CAR ID	PE Change	Comments
Victoria Bridge (WWTW)	S03236	58	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Waringsford	S02166	-18	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Waringstown	S02423	-897	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Warrenpoint (WWTW)	S02720	-16	The PE for this site has been updated with the latest Trade Information for AIR14
Whitehouse	S00265	44	The PE for this site has been updated with the latest Trade Information for AIR14
	Total	4534	Change in Line 5 PE since AIR13

The change in Pe equates to an increase in load of 99.29 t BOD/yr (i.e. 4534×60 for 60g/hd/day /1000/1000 x 365) from AIR13 to AIR14, allowing for rounding up and down and conversions.

Difference between AIR14 and AIR13:

Line 5 for AIR13 -	40,312.75
Line 5 for AIR 14 -	40,213.42
Total Difference -	99.33

Line 6 - Equivalent population served (resident)

The table below shows the changes in WWTWs since AIR13 that affects equivalent population served (resident) for Line 6. NB. Change in PE (-Ve AIR14 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Annalong (WWTW)	S00300	107	The PE for this site has been updated with the latest Trade Information for AIR14
Annsborough	S02687	-90	The PE for this site has been updated with the latest Trade Information for AIR14
Antrim (WWTW)	S01422	293	The PE for this site has been updated with the latest Trade Information for AIR14
Ardglass (WWTW)	S00268	2	The PE for this site has been updated with the latest Trade Information for AIR14
Ardstraw (WWTW)	S02997	-34	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Arney (WWTW)	S02999	-38	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Augher (WWTW)	S03005	212	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Aughil (WWTW)	S03006	109	This WWTWs is now a pumpaway for AIR14
Aughnacloy	S03007	286	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Ballee Road (75-83)	S04091	2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballintoy (Retention Tank)	S01174	67	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballybogy	S01087	71	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballycarry	S00267	-77	The PE for this site has been updated with the latest Trade Information for AIR14
Ballycastle (WWTW)	S01071	1861	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballyclare	S01467	-262	The PE for this site has been updated with the latest Trade Information for AIR14
Ballycranbeg	S00218	87	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballygawley (WWTW)	S03013	249	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballygowan	S00247	-10	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballykelly (L/Derry)	S03016	1209	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Ballykinler (WWTW)	S00299	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Ballymena (WWTW)	S01456	7951	The PE for this site has been updated with the latest Trade Information for AIR14

Name of Works	CAR ID	PE Change	Comments
Ballynahinch (Down)	S00311	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Ballywhiskin (Retention Tank)	S00827	75	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Banbridge (WWTW)	S02102	87	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Bankside Shinn	S02692	-11	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Belfast (WWTW)	S00345	-5779	The PE for this site has been updated with the latest Trade Information for AIR14
Belleek (Fermanagh)	S03024	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Benone (WWTW)	S03026	247	This WWTWs has been decommissioned for AIR14
Bolea (WWTW)	S03030	-20	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Bonnanaboigh	S03031	36	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Bready (WWTW)	S03971	4	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Cabragh (WWTW)	S02834	-2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Carrickfergus (WWTW)	S00261	-16	The PE for this site has been updated with the latest Trade Information for AIR14
Carrowdore	S00236	-386	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Castle Archdale (WWTW)	S03041	-6	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Castlederg (WWTW)	S03042	927	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Charlestown	S02399	-26	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Clady (Tyrone)	S04149	1	The PE for this site has been updated with the latest Trade Information for AIR14
Clogher (WWTW)	S03056	110	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Coalisland	S02828	-137	The PE for this site has been updated with the latest Trade Information for AIR14
Cookstown (WWTW)	S01582	188	The PE for this site has been updated with the latest Trade Information for AIR14
Cranfield (Down)	S02721	247	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Culcrow	S01146	-16	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Culmore (WWTW)	S03071	2144	The PE for this site has been updated with the latest Trade Information for AIR14
Darkley (WWTW)	S02569	-70	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dernaflaw	S03072	-47	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Derryhale	S02570	-7	The PE for this site has been updated with the latest Trade Information for AIR14
Dervock (WWTW)	S01102	-19	The PE for this site has been updated with the latest Trade Information for AIR14
Diamond cottages(1)	S01772	-13	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Donaghmore (WWTW)	S02840	-42	The PE for this site has been updated with the latest Trade Information for AIR14
Donemana	S03103	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Donnybrewer	S03080	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Downpatrick (WWTW)	S00771	88	The PE for this site has been updated with the latest Trade Information for AIR14
Draperstown	S01615	12	The PE for this site has been updated with the latest Trade Information for AIR14

Name of Works	CAR ID	PE Change	Comments
Dromara (WWTW)	S00316	1	The PE for this site has been updated with the latest Trade Information for AIR14
Dromore (Down)	S02127	-29	The PE for this site has been updated with the latest Trade Information for AIR14
Drumaness (WWTW)	S00293	189	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Drumavally	S03087	608	This WWTWs is now a pumpaway to the new Magilligan WWTWs
Drumilly	S02268	7	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Drumlough	S00320	-1	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dundrum (Down)	S00297	939	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dungannon	S02850	-5894	The PE for this site has been updated with the latest Trade Information for AIR14
Dungiven	S03101	16	The PE for this site has been updated with the latest Trade Information for AIR14
Dunmullan	S03102	-5	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dunmurry	S00346	-570	The PE for this site has been updated with the latest Trade Information for AIR14
Dunserverick (Retention Tank)	S01185	39	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Edenderry (Tyrone)	S03104	3	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ederney (WWTW)	S03106	-35	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Enniskillen	S03218	1560	The PE for this site has been updated with the latest Trade Information for AIR14
Ferris Bay (50)	S04084	4	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Fincarn	S03111	-2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Fivemiletown (WWTW)	S03113	54	The PE for this site has been updated with the latest Trade Information for AIR14
Garrison (WWTW)	S03115	38	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Glenstall	S01109	-591	The PE for this site has been updated with the latest Trade Information for AIR14
Gortaclady (WWTW)	S01575	-1	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Greenisland (WWTW)	S00263	-10	The PE for this site has been updated with the latest Trade Information for AIR14
Greysteel (WWTW)	S03123	-4	The PE for this site has been updated with the latest Trade Information for AIR14
Hilltown (WWTW)	S02701	-27	The PE for this site has been updated with the latest Trade Information for AIR14
Katesbridge	S02136	6	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Keady (Armagh)	S02553	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Kesh (WWTW)	S03140	-4	The PE for this site has been updated with the latest Trade Information for AIR14
Kilcarn Road(7-9)	S00250	6	This WWTWs has been ben re-designated as a private WWTWs for Air14
Kilkeel (WWTW)	S00313	-1753	A Flow & Load study was carried out for this site and PE adopted for AIR14
Killeen (Armagh)	S02294	-9	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Killeter (WWTW)	S03144	36	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Killinchy (WWTW)	S00252	2448	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Killough (Retention Tank)	S00275	-66	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Killygonlan (WWTW)	S02043	-165	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Killyleagh (WWTW)	S00273	844	The PE for this site has been updated with the latest Trade Information for AIR14
Kilmore (Down)	S00285	23	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Kilrea	S01156	221	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Kilross	S01622	2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Kilskeery	S03148	13	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Larne (WWTW)	S02044	4901	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Legacurry (Down)	S00321	-34	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Limavady (WWTW)	S03162	-17	The PE for this site has been updated with the latest Trade Information for AIR14
Lisburn (New Holland)	S00329	1182	The PE for this site has been updated with the latest Trade Information for AIR14.
Lisnadill (WWTW)	S02586	1	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Lisnaskea (WWTW)	S03171	1	The PE for this site has been updated with the latest Trade Information for AIR14
Longs Glebe	S01160	23	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Loughries	S00230	-18	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Macosquin	S01161	41	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Maghera (L/Derry)	S01629	-3	The PE for this site has been updated with the latest Trade Information for AIR14

Name of Works	CAR ID	PE Change	Comments
Magherafelt (WWTW)	S01621	-157	The PE for this site has been updated with the latest Trade Information for AIR14
Magilligan Point Road WWTW	S05593	-2574	This WWTWs is a new site for AIR14 and replaces Benone, Drumavalley and Augil
Markethill	S02591	-3	The PE for this site has been updated with the latest Trade Information for AIR14
McCandless Terrace	S02150	3	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
McKinley Park	S02276	-9	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Meigh (WWTW)	S02277	-74	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Milltown (Aghory)	S02593	58	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moira	S02429	-59	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Monea (WWTW)	S03186	67	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moneydig	S01167	1	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moneymore (WWTW)	S01589	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Moneyreagh (WWTW)	S00337	-6	The PE for this site has been updated with the latest Trade Information for AIR14
Moneyscalp	S02710	-2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moneyslane (WWTW)	S02151	-47	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moss Road(36-38)	S00853	3	This WWTWs has been ben re-designated as a private WWTWs for Air14
Mountain View (Drumintee)	S02278	42	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Mountfield (WWTW)	S03192	42	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Mountnorris	S02248	109	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moy (WWTW)	S02859	-248	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Newcastle (WWTW)	S00303	-8	The PE for this site has been updated with the latest Trade Information for AIR14
Newry (WWTW)	S02685	-1130	The PE for this site has been updated with the latest Trade Information for AIR14
Newtownbreda (WWTW)	S00342	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Newtownbutler (WWTW)	S03200	446	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Newtownstewart (WWTW)	S03202	2	The PE for this site has been updated with the latest Trade Information for AIR14
North Coast (WWTWs)	S04150	-1296	The PE for this site has been updated with the latest Trade Information for AIR14
Omagh (WWTW)	S03999	-1207	The PE for this site has been updated with the latest Trade Information for AIR14
Poyntzspass (WWTW)	S02156	-3	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Priestland	S01169	13	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Rathlin (Retention Tank)	S00902	93	This WWTWs has been replaced by Rathlin New (WWTWs)
Rathlin Island (New) WWTW	S05624	-93	This WWTWs is a new site for AIR14 replacing the old Rathlin WWTWs
Robinsonstown	S02419	49	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Roughfort (WWTW)	S01470	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Seahill (WWTW)	S00774	-1	The PE for this site has been updated with the latest Trade Information for AIR14

Name of Works	CAR ID	PE Change	Comments
Stewartstown	S01599	-256	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Stoneyford (WWTW)	S00328	-15	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Strabane	S03223	-386	The PE for this site has been updated with the latest Trade Information for AIR14
Straid (Ballymena)	S01455	2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Tamnamore (WWTW)	S02862	-15	The PE for this site has been updated with the latest Trade Information for AIR14
Tandragee	S02174	-1868	The PE for this site has been updated with the latest Trade Information for AIR14
The Oyster Yard WWTW	S05533	15	Actual PE for this site updated following an On-Site house count by APT
Thorney Glen	S00284	-8	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Trench Road (66-70)	S04118	-2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Trillick (WWTW)	S03231	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Tullyroan	S02600	24	The PE for this site has been updated with the latest Trade Information for AIR14
Victoria Bridge (WWTW)	S03236	58	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Waringsford	S02166	-18	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Waringstown	S02423	-897	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Warrenpoint (WWTW)	S02720	-16	The PE for this site has been updated with the latest Trade Information for AIR14
Whitehouse	S00265	44	The PE for this site has been updated with the latest Trade Information for AIR14
	Total	4187	Change in Line 6 PE since AIR13

Difference between AIR14 and AIR13:

Line 6 for AIR13 -	1806820
Line 6 for AIR 14 -	1802630
Total Difference -	4190

Line 7 - Equivalent population served (resident) (Numerical consents)

The table below shows the changes in WWTWs since AIR13 that affects equivalent population served (resident) with numerical consents for Line 7. NB. Change in PE (-Ve AIR14 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Annsborough	S02687	-90	The PE for this site has been updated with the latest Trade Information for AIR14
Antrim (WWTW)	S01422	293	The PE for this site has been updated with the latest Trade Information for AIR14
Ardglass (WWTW)	S00268	2	The PE for this site has been updated with the latest Trade Information for AIR14
Ardstraw (WWTW)	S02997	-34	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Augher (WWTW)	S03005	212	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Aughnacloy	S03007	286	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Ballybogy	S01087	71	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballycarry	S00267	-77	The PE for this site has been updated with the latest Trade Information for AIR14
Ballycastle (WWTW)	S01071	1861	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballyclare	S01467	-262	The PE for this site has been updated with the latest Trade Information for AIR14
Ballycranbeg	S00218	87	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballygawley (WWTW)	S03013	249	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Ballygowan	S00247	-10	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballykelly (L/Derry)	S03016	1209	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Ballymena (WWTW)	S01456	7951	The PE for this site has been updated with the latest Trade Information for AIR14
Ballynahinch (Down)	S00311	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Banbridge (WWTW)	S02102	87	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Belfast (WWTW)	S00345	-5779	The PE for this site has been updated with the latest Trade Information for AIR14
Belleek (Fermanagh)	S03024	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Bonnanaboigh	S03031	36	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Bready (WWTW)	S03971	4	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Cabragh (WWTW)	S02834	-2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Carrickfergus (WWTW)	S00261	-16	The PE for this site has been updated with the latest Trade Information for AIR14
Carrowdore	S00236	-386	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Castle Archdale (WWTW)	S03041	-6	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Castlederg (WWTW)	S03042	927	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Clady (Tyrone)	S04149	1	The PE for this site has been updated with the latest Trade Information for AIR14
Clogher (WWTW)	S03056	110	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Coalisland	S02828	-137	The PE for this site has been updated with the latest Trade Information for AIR14
Cookstown (WWTW)	S01582	188	The PE for this site has been updated with the latest Trade Information for AIR14
Culmore (WWTW)	S03071	2144	The PE for this site has been updated with the latest Trade Information for AIR14
Darkley (WWTW)	S02569	-70	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dernaflaw	S03072	-47	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Derryhale	S02570	-7	The PE for this site has been updated with the latest Trade Information for AIR14
Dervock (WWTW)	S01102	-19	The PE for this site has been updated with the latest Trade Information for AIR14
Donaghmore (WWTW)	S02840	-42	The PE for this site has been updated with the latest Trade Information for AIR14
Donemana	S03103	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Donnybrewer	S03080	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Downpatrick (WWTW)	S00771	88	The PE for this site has been updated with the latest Trade Information for AIR14
Draperstown	S01615	12	The PE for this site has been updated with the latest Trade Information for AIR14
Dromara (WWTW)	S00316	1	The PE for this site has been updated with the latest Trade Information for AIR14
Dromore (Down)	S02127	-29	The PE for this site has been updated with the latest Trade Information for AIR14
Drumaness (WWTW)	S00293	189	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dundrum (Down)	S00297	939	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dungannon	S02850	-5894	The PE for this site has been updated with the latest Trade Information for AIR14

Name of Works	CAR ID	PE Change	Comments
Dungiven	S03101	16	The PE for this site has been updated with the latest Trade Information for AIR14
Dunmurry	S00346	-570	The PE for this site has been updated with the latest Trade Information for AIR14
Ederney (WWTW)	S03106	-35	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Enniskillen	S03218	1560	The PE for this site has been updated with the latest Trade Information for AIR14
Fivemiletown (WWTW)	S03113	54	The PE for this site has been updated with the latest Trade Information for AIR14
Garrison (WWTW)	S03115	38	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Glenstall	S01109	-591	The PE for this site has been updated with the latest Trade Information for AIR14
Greenisland (WWTW)	S00263	-10	The PE for this site has been updated with the latest Trade Information for AIR14
Hilltown (WWTW)	S02701	-27	The PE for this site has been updated with the latest Trade Information for AIR14
Keady (Armagh)	S02553	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Kesh (WWTW)	S03140	-4	The PE for this site has been updated with the latest Trade Information for AIR14
Kilkeel (WWTW)	S00313	-1753	A Flow & Load study was carried out for this site and PE adopted for AIR14
Killinchy (WWTW)	S00252	2448	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Killygonlan (WWTW)	S02043	-165	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Killyleagh (WWTW)	S00273	844	The PE for this site has been updated with the latest Trade Information for AIR14
Kilmore (Down)	S00285	23	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Kilrea	S01156	221	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Larne (WWTW)	S02044	4901	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Limavady (WWTW)	S03162	-17	The PE for this site has been updated with the latest Trade Information for AIR14
Lisburn (New Holland)	S00329	1182	The PE for this site has been updated with the latest Trade Information for AIR14
Lisnaskea (WWTW)	S03171	1	The PE for this site has been updated with the latest Trade Information for AIR14
Loughries	S00230	-18	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Macosquin	S01161	41	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Maghera (L/Derry)	S01629	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Magherafelt (WWTW)	S01621	-157	The PE for this site has been updated with the latest Trade Information for AIR14
Magilligan Point Road WWTW	S05593	-2574	This WWTWs is a new site for AIR14 and replaces Benone, Drumavally and Augil
Markethill	S02591	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Meigh (WWTW)	S02277	-74	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moira	S02429	-59	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Monea (WWTW)	S03186	67	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moneymore (WWTW)	S01589	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Moneyreagh (WWTW)	S00337	-6	The PE for this site has been updated with the latest Trade Information for AIR14

Name of Works	CAR ID	PE Change	Comments
Moneyslane (WWTW)	S02151	-47	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Mountfield (WWTW)	S03192	42	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Mountnorris	S02248	109	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moy (WWTW)	S02859	-248	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Newcastle (WWTW)	S00303	-8	The PE for this site has been updated with the latest Trade Information for AIR14
Newry (WWTW)	S02685	-1130	The PE for this site has been updated with the latest Trade Information for AIR14
Newtownbreda (WWTW)	S00342	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Newtownbutler (WWTW)	S03200	446	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Newtownstewart (WWTW)	S03202	2	The PE for this site has been updated with the latest Trade Information for AIR14
North Coast (WWTWs)	S04150	-1296	The PE for this site has been updated with the latest Trade Information for AIR14
Omagh (WWTW)	S03999	-1207	The PE for this site has been updated with the latest Trade Information for AIR14
Poyntzspass (WWTW)	S02156	-3	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Robinsonstown	S02419	49	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Roughfort (WWTW)	S01470	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Seahill (WWTW)	S00774	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Stewartstown	S01599	-256	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	PE Change	Comments
Stoneyford (WWTW)	S00328	-15	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Strabane	S03223	-386	The PE for this site has been updated with the latest Trade Information for AIR14
Tamnamore (WWTW)	S02862	-15	The PE for this site has been updated with the latest Trade Information for AIR14
Tandragee	S02174	-1868	The PE for this site has been updated with the latest Trade Information for AIR14
Trillick (WWTW)	S03231	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Victoria Bridge (WWTW)	S03236	58	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Waringstown	S02423	-897	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Warrenpoint (WWTW)	S02720	-16	The PE for this site has been updated with the latest Trade Information for AIR14
Whitehouse	S00265	44	The PE for this site has been updated with the latest Trade Information for AIR14
	Total	2712	Change in Line 7 PE since AIR13

Difference between AIR14 and AIR13:

Line 7 for AIR13 -	1,742,900
Line 7 for AIR 14 -	1,740,190
Total Difference -	2710

Line 8 - Number of sewage treatment works

The number of WWTWs of 1015, on this line differs from the total of 1024 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 AIR13 for Line 8.

Name of Works	CAR ID	Change in Nr of STWs	Comments
Aughil (WWTW)	S03006	Removed	This WWTWs is now a pumpaway for AIR14
Benone (WWTW)	S03026	Removed	This WWTWs is now a pumpaway for AIR14
Drumavally	S03087	Removed	This WWTWs is now a pumpaway to the new Magilligan WWTWs

Kilcarn Road(7-9)	S00250	Removed	This WWTWs has been ben re-designated as a private WWTWs for Alr14
Magilligan Point Road WWTW	S05593	Added	This WWTWs is a new site for AIR14 and replaces Benone, Drumavalley and Augil
Moss Road(36-38)	S00853	Removed	This WWTWs has been ben re-designated as a private WWTWs for Alr14
Rathlin Island (New) WWTW	S05624	Added	This WWTWs is a new site for AIR14 replacing the old Rathlin WWTWs
		Net Reduction	3

Difference between AIR14 and AIR13:

Line 8 for AIR13 -	1,018
Line 8 for AIR 14 -	1,015
Total Difference -	3

Line 9 – Treatment capacity available

The table below shows the changes in Treatment Capacity Available at WWTWs since AIR13 for Line 9. NB. Change in PE (-Ve AIR14 PE Higher).

Name of Works	CAR ID	PE Change	Comments
Arney (WWTW)	S02999	41	This WWTWs was upgraded in AIR14
Aughil (WWTW)	S03006	132	This WWTWs is now a pumpaway for AIR14
Ballynahinch (Down)	S00311	-8500	This WWTWs was upgraded in AIR14
Benone (WWTW)	S03026	800	This WWTWs has been decommissioned for AIR14
Capecastle	S01179	-52	This WWTWs was upgraded in AIR14
Drumavally	S03087	1290	This WWTWs is now a pumpaway to the new Magilligan WWTWs
Fincarn	S03111	91	This WWTWs was upgraded in AIR14
Gulladuff (WWTW)	S01619	-651	This WWTWs was upgraded in AIR14
Kilcarn Road(7-9)	S00250	6	This WWTWs has been ben re-designated as a private WWTWs for Alr14
Maghera (L/Derry)	S01629	-931	This WWTWs was upgraded in AIR14
Magilligan Point Road WWTW	S05593	-8696	This WWTWs is a new site for AIR14 and replaces Benone, Drumavalley and Augil
Moss Road(36-38)	S00853	3	This WWTWs has been ben re-designated as a private WWTWs for Alr14
Mounthill	S01465	-168	This WWTWs was upgraded in AIR14
Rathlin Island (New) WWTW	S05624	-200	This WWTWs is a new site for AIR14 replacing the old Rathlin WWTWs
Thorney Glen	S00284	-30	This WWTWs was upgraded in AIR14

Name of Works	CAR ID	PE Change	Comments
	Total	-16865	Change in Line 9 PE since AIR13

The change in PE equates to an increase in load of 1.01 t BOD/day (i.e. 16865 x 60 for 60g/hd/day /1000/1000) from AIR13 to AIR14, allowing for rounding up and down and conversions.

Difference between AIR14 and AIR13:

Line 9 for AIR13 -	132.41
Line 9 for AIR 14 -	133.42
Total Difference -	1.01 increase

The confidence grade for line 8 remains as A2 (as for AIR13), as during the year a small number of WWTWs have been removed from the list due to realisation of 'private' ownership, or where individuals have installed their own septic tank, rendering the facility serving only one property. 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 699 WWTWs (excluding tourist PE) are listed as having a PE of less than 100.

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 PPP Catchments to PPP Treatment Works. This information was not provided by the PPP Contractors as they do not operate these catchments.

Line 6 - Equivalent population served (resident)

The change in the Equivalent Population Served (resident) receiving treatment reflects the change in load received from the NIW Catchments.

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 14 submission Table 15 (NIW Only) relates to sewage sludge produced for 2013/14 (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 C480 (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 C480 has been collated for the period of 2013/14.

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 combined for the Total Table 15 submission. This data is also submitted through PPP reporting in Table 42.

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.

Line 17 - Total sewage sludge disposal

Northern Ireland Water disposes the same amount of sludge as that produced (Line 15). NI Water remains committed to compliance with the requirements of the "Safe Sludge Matrix". A total of 97.53% of sewage sludge to PPP during 2013/14. The total estimated quantity of grit and screenings removed as part of the sewage treatment process and disposed of separately under Tender C480 (Collection, Transportation and Disposal of Waste by skip) has been collated and disposed to landfill in 2013/14.

PPP only

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 by the Contractors.

The variations are tabulated below;

PPP Production	AIR14	AIR13	AIR12	AIR11	AIR10
Armagh WWTW	0.547	0.535	0.570	0.759	0.84
Richhill WWTW	0.071	0.065	0.066	0.213	0.21
Ballynacor WWTW	2.007	2.069	3.330	2.468	2.29
Ballyrickard WWTW	1.126	1.158	1.225	1.627	1.717
NDA WWTW	1.920	1.628	1.559	1.753	1.654
Kinnegar WWTW	0.643	0.726	0.823	0.792	0.7
Omega Screenings and Grit	0.088	0.106			
Kinnegar Screenings and Grit	0.047	0.022			
Totals	6.449	6.309	7.573	7.612	7.411

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

In AIR13 the Omega Contractor reported a disposal of 37.6 ttds sludge disposed of. This year (AIR14) the reported figure is 38.1ttds.

The variance of 0.5ttds is 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) Variations in quantities of sludge produced across PPP and NIW STWs.
- (iv) Reporting of Screenings and Grit, and modification to accuracy where possible.

Specific Commentary Requirements:

- Assumptions Made:
 - 60g/h/d as per NIAUR requirements

- Skips weights (Screenings and Grit) are recorded in wet tonnes. An assumption of 30% 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 Contract 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 BOD₅ loads recorded by the end of the year and represent the load received for the AIR14 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 BOD₅ 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 Contracts 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 AIR 10-13.

Total Table

Line 14 - Percentage unsatisfactory sludge disposal

No change – the PPP Contractor has confirmed that all sludges were disposed of through authorised routes.

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 AIR13 the PPP Contractors reported a disposal of 37.6 ttds sludge disposed of. This year the reported figure is 38.1 ttds.

In AIR13 the Company disposed of 0.9 ttds relating to grit/screenings sludge. This year (AIR14) the reported figure is 0.8 ttds.

In total, AIR13 reported 38.4 ttds of sludge disposed of by all parties. In this reporting year (AIR14) the figure is 38.9 ttds.

The variance of 0.5 ttds is considered to be a combination of:

- (i) An increase in total tonnage of sludge disposed of by the Omega contractor from NIW, Kinnegar and Omega WWTWs in combination.
- (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		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2010-11	CG	2011-12	CG	2012-13	CG	2013-14	CG	
A ASSET BALANCE AT APRIL 1											
1	Total length of sewers	km	2	14,745.61	B3	14,904.68	B3	15,090.35	B3	15,254.37	B3
2	Total length of "critical" sewers	km	2	3,653.62	C3	3,622.52	C3	3,656.86	C3	3,716.68	C3
B CHANGES DURING REPORT YEAR											
3	New "critical" sewers	km	2	16.18	B2	4.62	B2	33.50	C3	24.68	C3
4	"Critical" sewers - inspection by CCTV/man entry	km	2	86.89	B3	53.18	C4	51.79	C4	48.98	C4
5	"Critical" sewers - renovated	km	2	9.40	A2	2.86	B2	1.41	B2	0.99	B2
6	"Critical" sewers - replaced	km	2	6.50	B3	2.64	B2	1.04	B2	3.32	B2
7	Abandoned "critical" sewers and other changes	km	2	0.05	A2	0.00	B2	0.00	B2	1.48	B2
8	New "non-critical" sewers	km	2	195.62	B2	181.90	B2	145.40	C3	172.22	C3
9	"Non-critical" sewers - renovated	km	2	6.26	A2	6.26	B2	2.31	B2	2.93	B2
10	"Non-critical" sewers - replaced	km	2	4.58	B3	1.02	B2	19.29	B2	18.08	B2
11	Abandoned "non-critical" sewers and other changes	km	2	0.09	A2	0.72	B2	0	B2	0.36	B2
11a	Total length of sewers replaced or renovated	km	2	26.74		12.78		24.05		25.32	B2
12	Sewer collapses per 1,000km	nr	1	84.9	B2	80.6	B4	73.6	B3	72.7	B3
13	Sewer blockages per 1,000km	nr	1	1,759.8	B2	1,619.8	B4	1,363.6	B3	1,172.1	B3
13a	Number of sewer blockage clearance which exceeds 6 hours	nr	0			N/C		1,250	B3	1,104	A2
13b	Number of sewer blockage clearance which exceeds 12 hours	nr	0			N/C		849	B3	645	A2
13c	Number of sewer blockage clearance which exceeds 24 hours	nr	0			N/C		444	B3	203	A2
C ASSET BALANCE AT MARCH 31											
14	Total length of sewers	km	2	14,904.68	B3	15,090.35	B3	15,254.37	B3	15,410.44	B3
15	Total length of "critical" sewers	km	2	3,622.52	C3	3,656.86	C3	3,716.68	C3	3,732.98	C3
D INTERMITTENT DISCHARGES											
16a	Number of unsatisfactory intermittent discharges excluding CSOs (NIEA)	nr	0	218	C2	204	C2	197	C2	190	C2
16b	Number of unsatisfactory intermittent discharges CSOs (NIEA)	nr	0	379	C2	349	C2	318	C2	312	C2
17a	Number of intermittent discharges excluding CSOs	nr	0	1,519	B4	1,591	B3	1,675	B3	1,732	B3
17b	Number of CSOs	nr	0	748	B4	780	B3	779	B3	802	B3
E DRAINAGE AREA PLANS											
18	Cumulative number of drainage area plans completed	nr	0	71	A1	71	A1	71	A1	71	A1
19	Number of drainage area plan studies in progress at the report end of the report year	nr	0	0	A1	0	A1	1	A1	8	A1
20	Total sewerage drainage areas	nr	0	260	A2	261	A2	256	A2	254	A2
21	Cumulative % drainage area plan studies completed	%	1	27.3	A2	27.2	A2	27.7	A2	28.0	A2
22	% population/properties covered by completed studies	%	1	55.1	B3	54.7	B3	53.3	B3	53.2	B3
F SEWAGE TREATMENT COMPLIANCE MEASURES											
23	% of WwTWs discharges compliant with numeric consents	%	1	88.7		93.1		93.1		91.8	A1
24	% of total p.e. served by WwTWs compliant with numeric consents	%	1	80.4		93.9		97.9		94.5	C5
24a	% of total p.e. served by WwTWs compliant with numeric consents excluding upper	%	1	95.0		95.2		98.5		97.6	C5
F NOMINATED SEWERAGE SERVICE OUTPUTS											
25	Delivery of improvements to nominated OIDs as part of a defined programme of work	nr	0	20	A1	43	A1	38	B3	11	A2
26	Delivery of improvements to WWTW through nominated schemes as part of a defined programme of work	nr	0	29	B3	15	B3	12	B3	17	A2
27	Small WwTWs delivered as part of the rural wastewater investment programme	nr	0	11		23		14		7	A2

Table 16 - Sewerage Service Activities (NI Water only WWTW)**Line 1 – Total length of sewers at 1 April**

The value of 15,254.37 km has been extracted from line 14 of the AIR13 Table 16.

Line 2 – Total length of ‘critical’ sewers at 1 April

The value of 3716.67km has been extracted from line 15 of the AIR13 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	1.17	23.51	0	24.68
5	"Critical" sewers - renovated	0.16	n/a	0.825	0.99
6	"Critical" sewers - replaced	3.32	n/a	0	3.32
7	Abandoned "critical" sewers and other changes	1.48	n/a	0	1.48
8	New "non-critical" sewers	8.20	164.02	0	172.22
9	"Non-critical" sewers - renovated	1.58	n/a	1.348	2.93
10	"Non-critical" sewers - replaced	18.08	n/a	0	18.08
11	Abandoned "non-critical" sewers and other changes	0.36	n/a	0	0.36
11a	Total length of sewers replaced or renovated				25.31

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 NIW. The total length adopted has increased significantly from 158.6km in AIR13 to 187.53km – probably reflecting a recovery of the housing market.

The critical sewer lengths have been calculated using the same methodology as AIR13. The confidence grade is unchanged at C3.

Line 4 - ‘Critical’ sewers – inspection by CCTV/man entry

Line	Description	EP	In-house	Contractor	Total(km)
4	‘Critical sewers’- inspection by CCTV/man entry	6.83	27.88	14.269	48.98

The total length surveyed, 48.98 km, is similar to the AIR 13 length of 51.79km. The confidence grade is unchanged at C4.

It is acknowledged that more resources are required to classify lengths surveyed as being critical or non-critical.

Lines 5, 6, 9, 10 and 11a - sewers renovated and replaced

The total length renovated and replaced (25.32 km) is comparable to the AIR 13 figure of 24.06km.

The critical sewer element – 4.31km- has increased significantly from AIR 13 (2.45km). Confidence grades remain unchanged at B2.

Lines 7 and 11 - sewers abandoned

These lines had a zero return in AIR 13.

A return has been made for Engineering Procurement in AIR14.

Progress against PC13 Monitoring Plan

The renewal of sewers (renovation or replacement) is represented in the Monitoring Plan as a target output. The target was 9 km for the year 13/14. The amount achieved – 25.32km - far exceeds the target.

Lines 12-13c – Sewer collapses and blockages**General**

The Reporter made the following recommendation following the AIR13 audit.

“When taken in the context of poor blockage performance in NI (when compared to E&W), the low levels of capital investment in the SMRP may be a significant contributory factor to the disproportionately large number of blockages reported in the year (circa 21,000). We recommend that the cause of these high numbers is investigated to determine whether other causes may be contributing (egg the counting methodology, contractual arrangements, network attributes.) Nonetheless, there do appear to be some significant repeat blockage hotspots where a targeted approach would be most cost beneficial.”

As a result of this recommendation during this reporting period NI Water has investigated the high numbers of sewer blockages, this figure includes blockages in the main sewers and the lateral sewers yet the total length of sewers figure reported in Table 16 Line 14 relates to main sewers only. NIW has developed a method of estimating the length of lateral sewers. (A recent exercise was carried out using geospatial technology to create logical lateral sewers from properties to the sewer collection system this equates to an extra 2155km. These have not been included in the total provided. A full methodology can be obtained from Asset Information Development if required.)

As result of further refinement at NIW’s request the contractor now, (end of March 2014), 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 AIR15 to report on whether collapses or blockages have occurred in a private lateral, public lateral or public main sewer.

NIW are now being more proactive in their approach to repeat blockages. NIW Customer Field Managers (CFM) now have the resource of designated field technicians who are carrying out CCTV investigations on sewers which have repeat blockage complaints any faults found have been remedied thus reducing the number of repeat incidents.

NIW now run a monthly report in Ellipse which confirms the length of time a sewer blockage job took to be completed. 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.

Line 12 - Sewer collapses per 1,000 km

Due to the method of gathering the data on sewer collapses the regulatory instructions for calculating figures for Table 16 Line 12 and Table 46 Lines 32 and 33 must be reversed and is detailed below:

- 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 2014 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.

Line 13 - Sewer Blockages per 1,000 Km

Due to the method of gathering the data on sewer collapses, the regulatory instructions for calculating figures for Table 16 Line 13 and Table 46 Line 36 must be reversed and is detailed below:

- The number of sewer blockages is divided by the total length of sewers at 31 March 2014 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 report in Ellipse which confirms the length of time a sewer blockage job took to be completed. 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 AIR14 L12 & L13 is B3. NIW expects this to consolidate as we move forward into AIR15 as report building continues with the single Sewer Maintenance Contractor.

Because NIW are using an Ellipse report 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 AIR14.

Line 14 – Total length of sewers

The structure of the sewer data has been updated this year to align the ownership attributes for sewers to the same structure used for the water mains data. This change of structure has not affected the totals provided and the query used to extract the data from

the Corporate Asset Register has been modified to reflect the changes. 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 16a - 16b – Unsatisfactory intermittent discharges

In AIR09 this line was reported as the number of UIDs which had been classified to date – and a query was submitted to NIAUR seeking confirmation that this was the correct interpretation. The reply from NIAUR stated that they instead would like the return to be an estimate of the number of UIDs following completion of the classification process by NIEA. As a consequence the current return complies with that interpretation.

The line refers to those intermittent discharges which have been defined as Unsatisfactory by NIEA within the terms of the Guidelines to the UWWT Directive.

The estimate of the number of Unsatisfactory Intermittent Discharges which was produced for AIR 13 was:

CSOs: 318
Other UIDs: 197

In order that lines 16a and 16b should provide a stable baseline by which progress in UID improvements may be assessed, the above estimates have been retained – and the entries made in 16a and 16b for AIR14 are equal to the above figures minus the numbers UID improvements which were executed in 13/14. i.e.

CSOs: 318 – 6 = 312.
Other UIDs: 197 – 7 = 190.

Since the return is an attempt to predict the number of discharges which will ultimately be classified as unsatisfactory by NIEA the confidence grade is correspondingly low at C2.

Notes:

1. The estimate of UIDs excludes those IDs within the boundary of WWTW sites. These are not subject to any systematic classification by NIEA.
2. The estimate of UIDs excludes those IDs which are overflows from ‘Foul-only pumping stations’. These are not subject to any formal classification by NIEA.

Lines 17a and 17b – Intermittent discharges and CSO's**Sewerage System Intermittent Discharges****Table A - Depicting differences between the sewerage system overflows between AIR13 and AIR14**

Intermittent Discharges	APT Preliminary AIR13 Number	APT Preliminary AIR14 Number	Difference between AIR13 & AIR14 Preliminary Number	Total Number of Dual, Duplicates and Bifurcation assets to be removed	Final AIR14 Number (after removal of Dual, Duplicates and Bifurcation Assets)
Combined Storm Overflows (CSOs)	820	844	24	42	802
Sewage Pumping Stations (SPSs)	1052	1101	49	2	1099
Total Number of Intermittent Discharges	1872	1945	73	44	1901

Hence for AIR14 the total number of Sewerage System Overflows is 802+ 1099 i.e. 1901

From the APT data used there has been a preliminary net increase of 24 No: CSOs since AIR13 (i.e. 820 to 844). This is made up of 50 No: new CSOs minus 26No: CSOs that have been removed.

In addition there has been a net increase of 49 No: SPS overflows since AIR13 (i.e. 1052 to 1101). This is made up of 79 No: new SPSs overflows minus 30 No: SPSs overflows that have been removed.

Preliminary net increase of 24 No: CSOs since AIR13

Preliminary net increase of 49 No: SPS overflows since AIR13

Preliminary total increase of 73 No: overflows since AIR13 (i.e. 1872 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 NIW is 1945. However a number of these assets (44no.) are not included in the finalised number, a decrease of 7no from AIR13 (i.e. 51 to 44). This is because these are duplicates, dual manholes or bifurcation manholes which do not fall within the industry standard for reporting purposes.

The 44 No: sewerage system overflows have been categorised into the following:

- 29 No: Dual Manholes;
- 4 No: Bifurcation Manholes;
- 11 No: Duplicate Assets

(For further details see Tables E, F & G below)

Overall this equates to a:

Net increase of 73 No:	Preliminary overflows since AIR13
Plus:	<u>1872 No: Preliminary overflows identified in AIR13</u>
Sub Total:	1945 No: sewerage system overflows
Minus:	<u>44 No: O/Fs not included in the finalised number for AIR14</u>
Total:	1901 No: sewerage system overflows identified for AIR14

An exercise has been ongoing over the AIR 10,11,12,13 & 14 reporting years to confirm the number of sewage system overflows within NIW. 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 13, 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 NIW, it has to be signed off by NIW Network Sewage Business Unit and any changes included on NIW's Geographical Information Service (GIS). This process is ongoing and currently Network Sewage Business Unit has confirmed the information for 44 catchments in AIR 14 a total of 126 (8 in AIR 11 + 36 in AIR 12 + 38 in AIR 13 + 44 in AIR 14). This updated information has been included on GIS and submitted to NIEA with changes included in the AIR14 figures.

It was hoped that this process would have been completed in AIR 14, however due to the large quantity of data to be verified the process is ongoing, and is likely continue over the next 2 years, at which stage the information held on GIS will mirror exactly the status of the assets on the ground.

Table B – APT Preliminary changes in intermittent discharges by drainage area for AIR14

Drainage Area	No of CSO's added since AIR13	No of CSO's removed since AIR13	No of SPS's added since AIR13	No of SPS's removed since AIR13	Comments
Magilligan DA	0	0	1	0	Addition: Lower Doaghs Magilligan SP003288301
Magilligan DA	0	0	1	0	Addition: Drumavalley TPS CARID TBC
Magilligan DA	0	0	1	0	Addition: Aughil TPS CARID TBC
Magilligan DA	0	0	1	0	Addition: Benone Vacuum SP002021691
Hillsborough DA	0	0	1	0	Addition: Hillsborough CARID TBC
Rathlin DA	0	0	1	0	Addition: Rathlin CARID TBC
Moneyreagh DA	0	0	1	0	Addition: Moneyreagh North SP003152596
Total Number of intermittent discharges added or removed since AIR14	0	0	7	0	
Net decrease in CSO's since AIR14	0				
Net Increase in SPS's since AIR14			7		

Table C – AIC Preliminary changes in Intermittent discharges by drainage area for AIR14

Drainage Area	No of CSO's added since AIR13	No of CSO's removed since AIR13	No of SPS's added since AIR13	No of SPS's removed since AIR13	Comments
Ballyclare	0	-1	1	0	CSO's removed: CO000984677 SPS's added: SP002022822
Ballygawley	0	0	0	0	
Ballyhalbert	0	0	0	0	
Ballymena	+4	0	+3	-5	CSO's added: CO000984716, CO000984687, CO002587007, CO002932819, CSO's removed: SPS's added: SP002022689, SP002022660, SP002022661 SPS's removed:, SP002022642, SP002022657, SP002022649, SP002022635, SP002022645
Ballynacor	+1	-3	+24	-3	CSO's added: CO000984553 CSO's removed: CO000984406, CO000984405, CO000984395 SPS's added: SP002022411, SP002022187, SP002022432, SP002969615, SP002872852, SP003122216, SP003018129, SP002900857, SP002914542, SP002022467, SP002022401, SP002022435, SP002022191, SP002022431, SP002022423, SP002022419, SP002022417, SP002022414, SP002022413, SP002022408, SP002022402, SP002022475, SP002022220, SP002022437, SPS's removed: SP002022463, SP002022404, SP002022398
Ballyrickard	+8	0	0	0	CSO's added: CO003266755, CO003266513, CO003266610, CO003266544, CO003266518, CO003266510, CO003266507, CO003266524
Ballyronan	0	0	0	0	
Banbridge	0	0	+1	0	SPS's added: SP003248213
Belcoo	0	-1	+1	-1	CSO's removed: CO000984094 SPS's added: SP002854924 SPS's removed: SP002022045
Belfast	+2	-3	+2	-1	CSO's added: CO003202588, CO003200683 CSO's removed: CO000984465, CO000984367, CO000984362 SPS's added: SP003208139, SP002984327 SPS's removed: SP002022138
Belleek Newry	0	0	0	0	

Drainage Area	No of CSO's added since AIR13	No of CSO's removed since AIR13	No of SPS's added since AIR13	No of SPS's removed since AIR13	Comments
Beragh	0	0	0	0	
Caledon	0	0	+2	0	SPS's added: SP002021682, SP002838600
Castledearg	+1	-1	0	-1	CSO's added: CO000984237 CSO's removed: CO000984236 SPS's removed: SP002022118
Clogher	+1	0	0	0	CSO's added: CO000984243
Cloughy	0	0	+1	0	SPS's added: SP002022311
Coalisland	0	0	+1	0	SPS's added: SP002021763
Cranfield Kilkeel	0	0	+1	0	SPS's added: SP002022541
Derryhale	0	0	0	0	
Derrylin	0	0	0	-2	SPS's removed: SP002021972, SP002021971
Derrytrasna	0	0	+1	0	SPS's added: SP002581629
Desertmartin	0	0	0	0	
Donagheady	0	0	+1	0	SPS's added SP002021950
Downpatrick	0	0	+1	0	SPS's added SP003173800
Draperstown	0	-2	+4	-1	CSO's removed:CO000984729, CO000984728 SPS's removed SP002022722 SPS's added: SP00305601, SP002022908, SP002022881, SP002022889
Drumaness	+1	0	0	0	CSO's added: CO000984420
Dunmurry	0	0	+2	0	SPS's added SP002894836, SP002022132
Enniskillen	+6	-2	+4	-1	CSO's added: CO000984086, CO000984076, CO000984085, CO000984084, CO002845678, CO003123105

Drainage Area	No of CSO's added since AIR13	No of CSO's removed since AIR13	No of SPS's added since AIR13	No of SPS's removed since AIR13	Comments
					CSO's removed: CO000984075, CO000984087, SPS's added: SP002022015, SP002936186, SP002021995, SP002022063 SPS's removed: SP002021988,
Forkhill	0	0	+2	0	SPS's added: SP003227277, SP002779469
Garvagh	0	0	0	-1	SPS's removed: SP002022946
Kinnegar	+8	-4	+2	-2	CSO's added: CO000984317, CO000984522 CO000984531, CO002974693, CO003102075, CO003076613, CO000984343, CO000984342 CSO's removed CO000984338, CO000984336, CO000984304, CO002989075 SPS's added SP002022309, SP002022331 SPS's removed: SP002022289, SP002022282
Kircubbin	0	0	0	0	
Larne	0	0	+1	0	SPS's added: SP003195767
Lisnaskea	0	0	+1	-1	SPS's added: SP002022065 SPS's removed: SP002021984
Londonderry	0	0	0	0	
Lurganare	0	0	+1	0	SPS's added: SP002022628
Mullaghboy	0	0	0	0	
New Holland	+9	0	+7	0	CSO's added: CO003073735 CO000984524, CO003049121, CO000984526, CO003042476, CO003042519, CO003042584, CO000984409, CO003042485 SPS's added: SP002022146, SP002900470, SP002973733, SP003067664, SP002022453, SP002022450, SP002022155
Newcastle	+1	-2	0	-2	CSO's added: CO003166295 CSO's removed: CO000984436, CO002966590 SPS's removed: SP002022517, SP002022520
Omagh	+4	-2	+3	-9	CSO's added: CO000984103, CO003017117, CO003265396, CO003234606 CSO's removed: CO000984101, CO000984226 SPS's added: SP002022091, SP002994897, SP003019505

Drainage Area	No of CSO's added since AIR13	No of CSO's removed since AIR13	No of SPS's added since AIR13	No of SPS's removed since AIR13	Comments
					SPS's removed: SP002022089, SP002022072, SP002022074, SP002022077, SP002022093 SP002022096, SP002022075, SP002021852, SP002022092
Stoneyford	0	0	+1	0	SP003195981
Strabane	+1	-1	+4	0	CSO's added: CO003102480 CSO's removed: CO002966164 SPS's added: SP002022108, SP002022110, SP002021858, SP002022106
Warrenpoint	0	-1	0	0	CSO's removed: CO000984594
Whitehouse	+3	-3	0	0	CSO's added: CO003074405, CO003074404, CO003105846 CSO's removed: CO000984649, CO002871550, CO000984647
	50	-26	72	-30	
AIC Net Increase in CSO's since AIR13	+24				There has been a net increase of 24 No: CSO's since AIR13. This is made up of 50 No new CSOs minus 26 No CSOs that have been removed.
AIC Net Increase in SPS's since AIR13		42			There has been a net increase of 42 No SPS O/Fs since AIR13. This is made up of 72 No new SPS O/Fs minus 30 No SPS O/Fs that have been removed.

Table D – Combined Totals of APT & AIC Preliminary changes in Intermittent discharges by drainage area for AIR14

	No of CSO's added since AIR13	No of CSO's removed since AIR13	No of SPS's added since AIR13	No of SPS's removed since AIR13
Preliminary APT number of intermittent discharges added or withdrawn since AIR13	0	0	7	0
Preliminary AIC number of intermittent discharges added or withdrawn since AIR13	50	26	72	30
Subtotals	50	26	79	30
Preliminary net increase or decrease in SPS & CSO's since AIR13	+24		+49	
Preliminary total increase in sewage system overflows for AIR13	+73			

Table E - Dual Manholes not included in the finalised number for AIR14

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 No: of Dual Manholes not included in the finalised number for AIR14				29

Table F - Bifurcation Manholes not included in the finalised number for AIR14

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 AIR14				4

Table G - Duplicate Assets not included in the finalised number for AIR14

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 SPS 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 SPS	Y	2
Omagh	SP002021852	Omagh Transfer SPS	Y	
Ballynacor	CO000984402	Thomas Street	Y	2
Ballynacor	SP002022218	Annsborough	Y	
Total No: of Duplicate Manholes not included in the finalised number for AIR14				11

Above Ground Overflows from within WWTWs**Table H - Total number of Overflows within WWTWs**

	AIR13 Number	AIR14 Number
Total number of Overflows from within WWTWs	623	633

Hence for AIR14 the total number of overflows within WWTWs is 633

The overall number of WWTW overflows from AIR13 to AIR14 has had a net increase of 10 No: 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 AIR14 is mainly due to works being upgraded in the PC13 period, the roll out of the Rural Wastewater Investment Plan (RWWIP), which has resulted in numerous small works now having an overflow facility.

The changes in the number of overflows within WWTWs since AIR13 are as follows:

- 12 No: overflows within WWTWs withdrawn since AIR13. (See Table I, J, K, & L below)

- 22 No: Additional overflows within WWTWs since AIR13. (See Table M, N & O below)
- A net increase of 10 No: overflows since AIR13.

Table I - Overflows within WWTWs withdrawn since AIR13 due to works becoming a pump away in AIR14

NAME of Works	Site ID	Status in AIR14	Withdrawn O/Fs Since AIR13
Benone (WWTW)	S03026	Pumpaway to Magilligan Point Road WWTW	-1
Drumavally	S03087	Pumpaway to Magilligan Point Road WWTW	-3
Total No of overflows withdrawn since AIR13 due to the WWTWs becoming a pump away			-4

Table J - Overflows within WWTWs withdrawn since AIR13 due to works being upgraded

NAME of Works	Site ID	Status in AIR14	Changes to Overflows for AIR14	Withdrawn O/Fs Since AIR13
Ballynahinch (Down)	S00311	Works upgraded	Removal of 1 No FFT O/F	-1
Newcastle (WWTW)	S00303	Works upgraded	Removal of 1 No FA OF Removal of 1 No FFT OF	-2
Gulladuff (WWTW)	S01619	Works Upgraded	Removal of 1 No FFT OF	-1
Maghera (L/Derry)	S01629	Works Upgraded	Removal of 1 No FFT O/F	-1
Belleek (Armagh)	S02253	Base Maintenance	Removal of 1 No FFT O/F	-1
Total No of overflows withdrawn since AIR13 due to the works being upgraded				-6

Table K – Withdrawn Overflows within WWTWs due to incorrect designation in AIR13

NAME of Works	Site ID	Status in AIR13	Withdrawn O/Fs Since AIR13
Strabane	S03223	Removal of 1 No FFT O/F Removal of 1 No pumping station E/O	-2
Total No of Withdrawn Overflows due to incorrect designation in AIR13			-2

Table L– Summary of the total number of Overflows withdrawn since AIR13

Total No of overflows withdrawn since AIR13 due to the works becoming a pump away	-4
Total No of overflows withdrawn since AIR13 due to the works being upgraded	-6
Total No of Withdrawn Overflows due to incorrect designation in AIR13	-2
Combined Total No: of overflows within WWTWs withdrawn since AIR13	-12

Table M - Additional overflows within WWTWs since AIR13 due to WWTW upgrades

NAME of Works	Site ID	Status in AIR14	Changes to Overflows for AIR14	Additional O/Fs Since AIR13
Ballynahinch (Down)	S00311	Works upgraded	1 No additional FFT O/F with Storm Retention	1
Newcastle (WWTW)	S00303	Works upgraded	1 No additional FA OF with Storm Retention 1 No additional FFT OF with Storm Retention 1 No additional interstage pumping station E/O	3
Thorney Glen	S00284	Works Upgraded	1 No additional FFT O/F to Storm Tank	1
Capecastle	S01179	Works Upgraded	1 No additional FFT O/F to Storm Tank	1
Gulladuff (WWTW)	S01619	Works Upgraded	1 No additional FA OF with Storm Retention 1 No additional FFT OF with Storm Retention	2
Maghera (L/Derry)	S01629	Works Upgraded	1 No additional FFT O/F with Storm Retention	1
Mounthill	S01465	Works Upgraded	1 No additional FFT O/F to Storm Tank	1
Belleek (Armagh)	S02253	Base Maintenance	1 No additional FFT O/F with Storm Retention	1
Cabragh (WWTW)	S02834	Base Maintenance	1 No additional FA O/F	1
Milltown (Maghera)	S02416	Base Maintenance	1 No additional FA Overflow	1
Arney (WWTW)	S02999	Works Upgraded	1 No additional FA O/F (which also acts as PS E/O)	1
Fincarn	S03111	Works Upgraded	1 No additional FFT O/F to Storm Tank	1
Magilligan Point Road WWTW	S05593	Newly constructed works	1 No additional FFT with Storm Retention 1 No additional Final effluent PS O/F	2

NAME of Works	Site ID	Status in AIR14	Changes to Overflows for AIR14	Additional O/Fs Since AIR13
Rathlin Island (New) WWTW	S05624	Newly constructed works	1 No additional FFT O/F to Storm Tank	1
Total No: of additional overflows since AIR13 due to WWTWs being upgraded				18

Table N - Additional overflows within WWTWs due to incorrect designation in AIR13

NAME of Works	CAR ID	Status in AIR14	Changes in Overflows for AIR13 from Process Info	Additional O/Fs Since AIR13
Strabane	S03223	Wrongly designated O/Fs changed for AIR14	1 No additional Formula "A" O/Fs (which also act as PS E/O) 1 No additional FFT O/Fs (which also act as PS E/O) 1 No additional FFT O/Fs with Storm Retention	3
Swatragh (WWTW)	S01637	Wrongly designated O/Fs changed for AIR14	1 No additional FA O/F (gravity inlet)	1
Totals No: of additional overflows within WWTWs due to incorrect designation in AIR13				4

Table O – Summary of additional overflows within WWTWs since AIR11

Total No: of additional overflows since AIR13 due to works being upgraded	18
Totals No: of additional overflows within WWTWs due to incorrect designation in AIR13	4
Combined Total: of Additional overflows within WWTWs since AIR13	22

For AIR14, 2 No overflows have been withdrawn due to incorrect designation in AIR13 (see Table K) and 4 No additional overflows (see Table N) have now been included due to incorrectly designated in AIR13. This equates to net increase of 2 No: overflows due to incorrect designation in AIR13.

Table P – Summary of Overflow type within WWTWs

Overflow Type	AIR13 Overflows from WWTWs	AIR13 Overflows listed for comparison purposes with AIR14	AIR14 Overflows from WWTWs	AIR14 Overflows listed for comparison purposes with AIR13	Difference between AIR13 & AIR14
Formula "A" O/Fs only	163	182	165	188	6
Formula "A" O/Fs (which also act as PS E/O)	15		17		
Formula "A" O/Fs with Storm (which also act as PS E/O)	4		6		

Overflow Type	AIR13 Overflows from WWTWs	AIR13 Overflows listed for comparison purposes with AIR14	AIR14 Overflows from WWTWs	AIR14 Overflows listed for comparison purposes with AIR13	Difference between AIR13 & AIR14
FFT O/Fs only	115	305	109	311	6
FFT O/Fs (which also act as PS E/O)	16		17		
FFT O/Fs with Storm Retention	163		175		
FFT O/Fs with Storm Retention (which also act as PS E/O)	11		10		
3 DWF	18	18	18	18	0
Additional Overflows-storm	6	118	6	116	-2
Additional Overflows-other structures	6		6		
Additional Overflows-pumping station E/O	106		104		
Total No of WWTWs Overflows	623	623	633	633	10

Since AIR13 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 AIC data due to the on-going AIC process of subscribing WOC information across onto GIS.

Hence the **value for line 17a** i.e. 'Number of intermittent discharges excluding CSOs' (i.e. number of PS overflows in Sew. System 1099 and the total number of overflows within WWTWs of 633) = **1732**.

Comparison between AIR13 & AIR14 - Intermittent discharges excluding CSOs

The number of intermittent discharges excluding CSOs in AIR13 was 1675. This was made up of 623 WWTW overflows + 1052 SPS overflows.

In comparison the number of intermittent discharges excluding CSOs in AIR14 has increased by 57 No: intermittent discharges to 1732.

The net increase in the number of intermittent discharges excluding CSOs is due to a net increase of 10 No: WWTW overflows and a net increase of 47 No: SPS overflows since AIR13. This is mainly due to works being upgraded and the roll out of the Rural Wastewater Investment Plan (RWwIP), which has resulted in numerous small works now having an overflow facility.

The **value for line 17b** i.e. 'Number of CSOs' (i.e. the number of CSOs in the Sew. System) = **802**.

Comparison between AIR13 & AIR14 – CSOs in the Sewerage System

The number of CSOs in the sewerage system has had a net preliminary increase of 24 No: CSOs since AIR13 i.e. (820 in AIR13 - 844 in AIR14). The final reported number is 802, 844 minus 42 Dual, Duplicates and Bifurcation assets which are not reported upon.

This net increase previously discussed is mainly due to on-going improvements in our GIS network data, and the addition of CSO's 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 and included 109 drainage areas. The status of the 109 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 a two-year hiatus, procurement of drainage area studies recommenced in early 2013 and eight network studies are currently in progress.

Some of these have achieved completion of the first stage- Model Build and Verification – of a study, but not the second – Needs and Options- stage.

3. Specification

A review of NIW's DAS specification by an external consultant is currently in progress. It is intended that a greater emphasis will be placed upon the definition of capital maintenance needs than hitherto.

4. PC 15

To date, the principal driver for DAPs in N.I. 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.

DRAINAGE AREA STUDY PROGRAMME STATUS AT APRIL 2013

CATEGORY A - DAS's 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		
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	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
	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	
	Irvinestown	2240	
	Lisnaskea	4029	

	Catchment	Domestic population	
CATEGORY B POPULATION		34634	

CATEGORY C - DAS STAGE 1 COMPLETE

Initial DAS	Catchment	Domestic population	
	Coalisland	6576	
	Gilford	2028	
	Markethill	2276	
	Castleberg	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	
	REVISITED DAS		
	Ballymena	43,620	
	Omagh	22,784	
	Cookstown	12,724	

CATEGORY D – DAS YET TO COMMENCE

	Catchment	Domestic population	
	Newtownbreda	31,785	

CATEGORY E - DASs WHICH WERE IMPLEMENTED

	Catchment	Domestic population	
	Larne	21,749	
	Cushendall	2750	
	Glenarm	757	
	Cushendun	564	
	Portrush	7588	
	Portstewart	9563	
	Newry	35,558	
	Banbridge	17,033	
	Rostrevor	2500	

	Catchment	Domestic population	
	Enniskillen	15,458	
	Helens Bay	1410	

CATEGORY F - DASs REQUIRING REVISIT

	Catchment	Domestic population	
	Crumlin*	4260	
	Hollywood*	12000	
	Whitehouse	66,885	
	Belfast*	239,457	
	Greenisland	8275	

Domestic population extracted from Asset Performance "Master List of AIR 12" spreadsheet for NIW WWTWs, except those asterisked. Asterisked catchments are those which are conveyed to a common treatment centre: populations for these have been extracted from NIAMP 2 (2002).

The above domestic PEs have been updated where possible from the 'Master List of AIR12' spreadsheet.

Please note the following colour codes:

- Blue – PE has been updated according to AIR12 residential PEs
- Green – Indicates that a WWTWs is no longer present at that location and the PE has not been updated
- Red – Indicates a PPP catchment and PE has not been updated

Lines 23 – 24a 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, with WOC conditions 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 2013 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 14

1. The most significant change in compiling AIR 14 data is that the base for the WWTW in service now 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 12 Return. These same PE's were also used to calculate the number of audit samples required per site for the 2013 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 14 contains a number of works which have crossed sampling thresholds. Table 1, which indicates the sampling frequencies associated with WWTW PE's, is provided overleaf.

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	48

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 below.

Table 2 – Sampling Frequency Threshold Changes

Works Name	PE used in AIR14	PE Supplied by Asset Management	Threshold Being Crossed
Ballymena	113,825	80,361	100,000
Coalisland	12095	9929	10,000
Dunmurry	53,605	45,798	50,000
Moy	5,084	3,206	5,000

The 2012 sample scheduling PE data, which was agreed with NIEA in November 2011, has been applied to the works in Table 2.

1. Only the resident PE is included in the compliance assessment i.e. tourist/visitors are not included in the total PE for Lines 24 and 24a.
2. 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 (NH₄). 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 14 Calculation Spreadsheet

No. of NI Water Only WWTW's = 231

No. of failing NI Water Only works = 19

No. of passing NI Water Only works = 212

$212/231 \times 100 = 91.77\%$

Reported to one decimal place = **91.8%**

Line 24 – Percentage of Total PE Served by WWTW's Compliant with Numeric Consents (Upper Tier Fails Included)

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 14 Calculation Spreadsheet

PE of failing NI Water Only works = 97132

Total PE of NI Water Only works = 1776174

PE of passing NI Water Only works = 1679042

$1679042 / 1776174 \times 100 = 94.53$

Reported to one decimal place = **94.5%**

Line 24a – Percentage of total PE served by WwTWs compliant with numeric consents (Upper tier fails excluded)

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 14 Calculation Spreadsheet

PE of failing NI Water Only works (Exc UT) = 42667

Total PE of NI Water Only works = 1776174

PE of passing NI Water Only works = 1733507

$1733507 / 1776174 \times 100 = 97.60$

Reported to one decimal place = **97.6%**

The data reported in this table is new for AIR14. As more information is developed in future AIR reporting cycles, further commentary can be developed on emerging trends for these measures.

Roles and Responsibilities in Production of Compliance Statistics

The relevant personnel and contact numbers are given in Appendix 3. Contact numbers for NIEA staff are also included.

LIMS Manager/Deputy**In conjunction with the Waste Water Manager:**

- Obtain PE figures from the Asset Management section in October each year and agree with NIEA by November.
- Agree the WWTW to be considered for compliance assessment and sampling schedule with NIEA in November for the following year.

Sole responsibility

- Liaise with the Laboratory Sampling Manager/Deputy in scheduling samples.
- Review standards within LIMS as instructed by the Wastewater Regulation Manager.
- Amend standards within LIMS in response to Interim Time Banded Standards (ITBS) as instructed by the Wastewater Regulation Manager.

- Liaison with Sampling Manager/NIEA on rescheduling in all instances where either spot or composite samples are not taken as scheduled.
- Activate automatic samplers for collection of UWWTR composite samples.
- Liaison with Sampling Manager and Wastewater Services scientific staff where samplers fail to operate.

Wastewater Regulation Manager/Deputy

- Joint assessment with the LIMS Manager of PE's and WWTW for compliance assessment and sample scheduling.
- Submit applications for Interim Time Bounded Standards in a timely manner to ensure the standards are in place prior to the commencement of a Capital Works project.
- Submit applications for sample discounts within the 15 day timescale set by NIEA.
- Liaise with Wastewater Services staff on ITBS applications and discounting of samples.
- Liaise with the LIMS Manager/Deputy on updating standards/discounts as received from NIEA.
- On a monthly basis, from March onwards, produce compliance data on the basis of the methodology outlined previously to meet the timeframe of the KPI, Board and CSDD/MT reports.
- Liaise with Wastewater Services staff on a monthly basis to agree compliance figures.
- Produce the end of year compliance figures by the end of February the following year.
- In conjunction with NIEA, cross check on the WWTW standards prior to the start of each calendar year.
- Review procedures prior to commencement of each calendar year.

Head of Environmental Regulation

- Audit the compliance figures as produced by the Wastewater Regulation Manager prior to submission.
- Liaise with the Head of Wastewater Services on general compliance issues.
- Liaise with the Head of Wastewater services on setting KPI targets.

APPENDIX 1**Table 3 – Permitted Exceedances**

No of Samples	Permitted Exceedances
4-7	1
8-16	2
17-28	3
29-40	4
41-53	5

APPENDIX 2

NORMAL OPERATING CONDITIONS UNUSUAL SITUATIONS AND NORMAL LOCAL CLIMATIC CONDITIONS

1. THE REGULATIONS' TERMINOLOGY

1.1 The term "normal operating conditions" is used in paragraph 4(b) of Part II of Schedule 3; the phrase "unusual situations such as those due to heavy rain" is used in paragraph 5 of Part II of Schedule 3; "normal local climatic conditions" are referred to in regulation 4(4)(a).

2. INTERPRETATION

2.1 In order to assist in interpreting the weather conditions that might be considered to be abnormal or unusual; a definition of exceptional weather conditions is given below, together with an example of what might be considered to be other kinds of abnormal or unusual operating conditions.

2.2 The abnormal conditions set out below include capital works construction and periods of industrial action. Both are being considered by the Regulatory Committee, along with other possible exceptions suggested by other Member States. An amendment to this guidance note will be issued in the light of any guidance from the Regulatory Committee.

2.3 Definitions

2.3.1 For the purpose of this *registered standard / consent* the works shall be deemed to have been under 'normal operating conditions' except during a period when the following apply:

- a. 'Unusual weather conditions' which shall include the following:
 - i) low ambient temperature as evidenced by effluent temperature of 5°C or less, or by the freezing of mechanical equipment in the works;
 - ii) significant snow deposits;
 - iii) fluvial flooding;
 - iv) weather conditions causing unforeseen loss of power to the works which could not be ameliorated by the reasonable provision and operation of standby generator facilities.
- b. A reduction in the level of treatment due to periods of industrial action or acts of vandalism that could not have been reasonably prevented.
- c. When the Regulator has issued a variation of the registered standard for reasons such as construction of capital works.

APPENDIX 3

CONTACT DETAILS

Head of Environmental Regulation

██████████ ██████████

Wastewater Regulation Manager

██████████ ██████████

Wastewater Regulation Deputy

██████████ ██████████

LIMS Manager

██████████ ██████████

LIMS Deputy

██████████ ██████████

NIEA CONTACTS

██████████ ██████████

██████████ ██████████

Line 25 - 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 there is full visibility of programme with NIEA down to the sign off of individual outputs within overall multiple projects.

The PC13 Monitoring Plan indicated a target of 84 UID improvements for the 2-year period. 12 PC13 nominated outputs were delivered by 31 March 2014 including UID244 Winters Lane, Omagh which was delivered early (March 2013). As such the Table claims 11 UID's completed for 13/14.

It is likely that a number of the remaining nominated outputs will not meet delivery in PC13 and NI Water has actively progressed substitution schemes in liaison with NIEA. Clarity on the changes is presently being drafted in Change Protocol.

Confidence grades

NI Water has improved the reporting process and the cross checking process for this line for the AIR14 submission. The confidence grades for this line were determined using the reporting guidance and were assessed as A2 – based on sound, time specific data captured relevant to each individual UID.

UIDs Delivered during the first year of PC13 – AIR14 Period

Catchment	UID Address	FD Reference	Project ID	Comments	Operational Date
Lisburn	Glenmore WwPS CSO Upgrade	UID065	KT415	6mm Screen on existing overflow with a non-return valve at discharge point	25/06/2013
Warrenpoint	Newry Road SPS	UID095	KV154	New Terminal Pumping Station to meet Formula A requirements. And new Storm Pumping Station. Provision of 6mm electrically powered screen.	14/01/2014
Warrenpoint	Drumsesk Road Header Tank CSO	UID234	KV154	Provision of 6mm screen	14/01/2014
Coalisland	Annagher SPS	UID245	KF037	New Pumping Station and pumping main. Overflow with 6mm Screen	28/03/2014
Coalisland	Campbell's Garage WwPS	UID246	KF037	Closed	28/03/2014
Coalisland	Washing Bay Road WwPS	UID247	KF037	Closed	28/03/2014
Castlewellan DAP Stage 1	Ballylough Road CSO 02	UID031	KV161	New CSO chamber with 6mm screen	31/03/2014
Castlewellan DAP Stage 1	Mill Hill CSO 04	UID033	KV161	New CSO chamber with 6mm screen and additional storage	31/03/2014
Castlewellan DAP Stage 1	Annsborough Park CSO 01	UID036	KV161	Relocation of discharge point of CSO and provision of 6mm screens	31/03/2014
Hillsborough /Lisburn	Magherageery PS CSO18	UID071	KT114	Provision of 6mm screens	18/03/2014
Newcastle	Harbour WwPS	UID260	KS848	Upgrade of CSO with 6mm screens	19/08/2013
Omagh	Winters Lane	UID244	KN646	Provision of 6mm screens	Early delivery 27/03/2013

Line 26 – Delivery of improvements to WwTW through nominated schemes as part of a defined programme of work

The PC13 Monitoring Plan indicated a target of 38 WwTW improvements for the 2-year period. 19 WwTW nominated outputs were delivered by 31 March 2014 including Forkhill WwTW and Mullaghbane WwTW which was delivered early in 2012/13. As such the Table claims 17 WwTW completed for 13/14, including the completion of 3 substantial capital base maintenance schemes.

Confidence grades

NI Water has improved the reporting process and the cross checking process for this line for the 13/14 AIR submission. The confidence grade for this line was determined using the reporting guidance and were assessed as A2, based on the evidence within the methodology and the small number of sites claimed.

WwTWs Delivered during the first year of PC13 – AIR14 Period

Project Name	Project Code	Beneficial Use Date	Comments
Benone Area Sewerage	KL350	16/09/2013	Decommissioning of Benone WwTW and construction of a WwPS
Benone Area Sewerage	KL350	16/09/2013	Decommissioning of Drumavelly WwTW and construction of WwPS
Benone Area Sewerage	KL350	16/09/2013	Decommissioning Aughil WwTW and construction of WwPS
Benone Area Sewerage	KL350	16/09/2013	Decommissioning of MOD WwTW and construction of WwPS
Benone Area Sewerage	KL350	16/09/2013	Decommissioning of NIPS WwTW and construction of WwPS
Benone Area Sewerage	KL350	16/09/2013	Provision of New Magilligan WwTW
Newcastle WwTW	KS848	09/12/2013	Upgrade of existing WwTW
Gulladuff WwTW	KB314	16/12/2013	Upgrade of WwTW with RBC.
Hillsborough WwTW	KT114	18/03/2014	Decommissioning of Hillsborough WwTW and construction of new WwPS with flow transfer to Lisburn
Ballynahinch WwTW	KS355	21/03/2014	Upgrade of existing WwTW
Moneyreagh WwTW	KR409	20/12/2013	Construction of Storm Pumping Station with flow transfer to Ballygowan
Dunmurry WwTW Sludge Facility	KT402	18/03/2014	
Ballyhornan Outfall Screen	KS844	31/12/2013	Provision on Screening facilities at Ballyhornan
Maghera WwTW Upgrade Phase 2	KB459	04/02/2014	Upgrade of existing WwTW
Belfast WwTW Base Maintenance Phase 2	KR530	18/03/2014	
Carrickfergus WwTW Base Maintenance	KR501	31/03/2014	
Strabane WwTW Base Maintenance	KN631	20/12/2013	

Line 27 - Investment in improvements to small wastewater treatment works as part of the Rural Wastewater Investment Programme.

The total delivery for this programme in PC13 is 25 works in total with 7 originally defined for the 1st year of the programme. Those works completing and referenced in AIR 14 are detailed below.

Name of Works	CAR Ref.	Current PE	Delivered PE	Year of Beneficial Use
Thorney Glen	S00284	58	64	May 2013
Rathlin Island	S00902	116+64	146+41	May 2013
Fincarn	S03111	87	97	June 2013
Procklis	S0145	92	102	June 2013
Capecastle	S01179	47	52	June 2013
Mounthill	S01456	243	300	Nov. 2013
Arney	S02999	212	291	Jan. 2014

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 RWwIP 12-14 Design Proforma.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17a SEWERAGE EXPLANATORY FACTORS

SEWERAGE SUB - AREA EXPLANATORY FACTORS (TOTAL)

DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	
			AREA 1 CG	AREA 2 CG	AREA 3 CG	AREA 4 CG	AREA 5 CG	AREA 6 CG	AREA 7 CG	AREA 8 CG	Total CG	
A SEWERAGE SUB AREAS												
A GENERAL												
	Area name:-											
1	Annual average resident connected population	000	1								1486.9	C3
2	Annual average non-resident population	000	1								28.0	C3
3	Volume of sewage collected (daily average)	MI/d	1								316.0	B3
4	Total connected properties	nr	0								669934	B2
5	Area of Sewerage District	km ²	0								13520	B2
B SEWERAGE DATA												
6	Total length of sewer	km	0								15410	B3
C Costs												
7	Sewerage: Direct Costs	£000	0								16211	
8	Sewerage: Power Costs	£000	0								5625	
9	Sewerage: Service Charges	£000	0								160	
10	Sewerage: General & Support Expenditure	£000	0								7388	
11	Sewerage: Functional Expenditure	£000	0								23599	

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 AIR14: Table 13: Line 10, the total connected population (comprising resident and non-resident population) is $1,514.925 \times 10^3$
- According to AIR14: Table 17a: Line 2, the annual average non-resident population is 28.018×10^3
- By calculation, the annual average resident connected population
= $1,514.925 \times 10^3 - 28.018 \times 10^3 = 1,486.907 \times 10^3$

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

AIR12	CG	AIR13	CG	AIR14	CG
$1,472.6 \times 10^{3*}$	C3	$1,483.2 \times 10^3$	C3	$1,486.9 \times 10^3$	C3

* Recalculated to include non-resident population and to take account of Revised Estimated Visitors to NI from GB and Overseas (2010; 2011)

The estimated annual average resident sewerage connected population has increased from $1,483.2 \times 10^3$ in AIR13 to $1,486.9 \times 10^3$ in AIR14, an increase of 3.7×10^3 (0.25%).

Confidence grade

There are two figures associated with the calculation of AIR14: Table 17a: Line 1: Column 9. The first figure is derived from AIR14: Table 13: Line 10 and was allocated a confidence grade of B3. The second figure is derived from AIR14: 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)

AIR12	CG	AIR13	CG	AIR14	CG
$26.5 \times 10^{3*}$	C3	28.8×10^3	C3	28.0×10^3	C3

*Recalculated to take account of Revised Estimated Visitors to NI from GB and Overseas (2010; 2011)

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

Tourism publications have undergone a number of changes in recent years. As well as changes to the consistency and scope of publications, the tourism estimates have been subject to a series of revisions due to improvements to the survey / analysis methodology or the inclusion of data returned after the publication date.

Each year, NI Water reviews all of the latest publications and adopts a methodology which best utilises the information available at the time. However, this does mean that the methodology is more likely to change from year to year.

NI Tourist Board used to have responsibility for conducting the NI Passenger Survey and producing reports on tourism and the provisional annual number of non-resident visitor nights (overseas + RoI tourists combined) was one of the figures they published. Towards the end of their run of responsibility and because of delays in the publication process, it was not possible to obtain a provisional annual figure in time for AIR, only a figure for the period January to September and this was the case for AIR11.

When responsibility for conducting the NI Passenger Survey shifted to NISRA and the responsibility for publishing reports on tourism shifted to DETINI, a combined figure for overseas + RoI tourists was no longer obtainable. Instead, a provisional figure was published from the NI Passenger Survey for overseas tourists alone. The number of RoI visitor nights could only be obtained by going to the Central Statistics Office RoI website and looking within the results of the HOTRA survey. This was the case for AIR12.

When it came to the completion of AIR13, the latest NI Passenger Survey and HOTRA Survey results were for 2011 and there was no choice but to develop a new methodology which did not depend on the use of current data. The new methodology was based on occupancy figures for 2010, 2011 and 2012, the numbers of non-resident visitor nights for 2010 and 2011 and an assumption that there was a relationship between the two sets of figures. The number of non-resident visitor nights for 2012 was estimated by solving a series of three equations.

This year there is a new NISRA publication entitled 'Northern Ireland Tourism Statistics October 2012 to September 2013' which has replaced the earlier style of tourism report. A provisional combined figure for overseas + RoI tourists (January to September 13) is included in the report which the Company has assumed to be more reliable than a figure based on the methodology developed for AIR13.

The AIR14 methodology is based on the provisional number of non-resident visitor nights for January to September 2013 and the number of non-resident visitor nights for 2013 has been estimated by applying a similar assumption as for AIR13, that there is a relationship between the occupancy of hotels and guesthouses/B&Bs and visitor nights.

Unfortunately, these issues make it very difficult to adopt a consistent methodology. If NISRA continues to produce the NI Tourism Statistics report, the Company should be able to use the same methodology for AIR15 it has used for AIR14 which will help to restore some consistency.

This year's estimated non-resident visitor night figure of 10,226,582 is less than last year's figure of 10,538,042. However, the following table shows a re-worked calculation for AIR13 based on data which is now available.

	AIR13
Non-resident visitor nights (Oct 12 – Sep 13)	10,054,000
Non-resident visitor nights (Jan 13 – Sep 13)	7,927,000
Non-resident visitor nights (Oct 12 – Dec 12)	2,127,000
Non-resident visitor nights (Jan 12 – Sep 12)	7,757,000
Non-resident visitor nights (Jan 12 – Dec 12)	9,884,000
Nights in 2012	366
Annual average non-resident population	27,005

When the AIR13 outturn is recalculated using the AIR14 methodology, the outturn changes from 28,792 to 27,005. This change is 6.2%.

Statement detailing estimation method used including date of data on which estimate is made

The percentage of annual bed-spaces sold each month was calculated as part of the methodology for AIR14: Table 2: Line 20: Population (winter).

Percentage bed-spaces sold from Jan 13 to Sep 13 =
 $5.24 + 6.44 + 7.41 + 7.71 + 9.64 + 9.92 + 10.22 + 12.02 + 8.92 = 77.51 \%$

The following statistics were derived from Table A2.4 on page 28 of the NISRA report entitled 'Northern Ireland Tourism Statistics October 2012 to September 2013', published on 6 February 2014 and available as a download from the DETNI website.

	Date Range	Overall Nights (000s)
All Visitors (exc. NI Residents)	Jan 13 – Sep 13	7,927

Using the statistics above, the number of non-resident visitor nights from Jan 13 to Dec 13 was estimated as follows:

Non-resident visitor nights from Jan 13 to Sep 13 = 7,927,000

Estimated non-resident visitor nights from Jan 13 to Dec 13 =
 $(7,927,000 / 77.51) \times 100 = 10,226,582$

The annual average non-resident population was estimated as follows:
 $10,226,582 / 365 \text{ nights} = \mathbf{28,018}$

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

Based on the re-worked calculation for AIR13, the estimated annual average non-resident sewerage population has increased from 27.0×10^3 in AIR13 to 28.0×10^3 in AIR14, an increase of 1.0×10^3 (3.7%).

According to the NISRA report entitled 'Northern Ireland Tourism Statistics October 2012 to September 2013', tourism in Northern Ireland in 2013 was influenced by a number of events including the UK City of Culture Year in Derry-Londonderry, the World Police and

Fire Games, 'Backin' Belfast' and the All-Ireland Fleadh. The good weather in the summer of 2013 may also have been an influencing factor.

Confidence grade

The annual average non-resident population is an estimate based on several sources of information:

1. The NISRA publications 'Statistics on Accommodation' 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 Tourism Statistics October 2012 to September 2013' 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. Although there have been changes in the methodology, data confidence is still believed to be comparable to previous years.

Line 3 – Volume of sewerage collected

This figure has been copied from AIR14 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 AIR14 has remained the same.

The difference between the AIR13 and the AIR14 figures is circa 4700. This can be explained by the following;

- 1) New Connections during the 2013/14 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:
 - a) The adding of properties NI Water allegedly didn't know about (This is the gap the Rapid-POINTER Phase 3 project demonstrated and Phase 4 aims to close out).
 - b) 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.

NI Water recognises there is an anomaly in terms of property numbers (between our 'Customer Contacts and Billing Database' and 'POINTER') – The Rapid-POINTER Phase 3 project has completed a pilot study and Phase 4 will aim to address this issue across Northern Ireland. NI Water hasn't had an update from LPS in terms of domestic data since 2007 – Our only form of update has been through customer contact. We recognise there is a need to review the process for both the creating and the demolishing of a property. This will be taken forward as part of our Data Quality work. As part of this work, we are also carrying out analysis and review of both water and sewerage status particularly in terms of data primacy.

Annex A details the Line Methodology followed for the figures calculated in Table 17a Line4.

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

The structure of the sewer data has been updated this year to align the ownership attributes for sewers to the same structure used for the water mains data. This change of structure has not affected the totals provided and the query used to extract the data from the Corporate Asset Register has been modified to reflect the changes. 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.

Lines 7-11 - Costs

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 2014. Work is on-going, through the Cost to Serve Project. Cost to Serve is not fully implemented and therefore could not be used for AIR14. 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, however, work is on-going to agree this. A total figure has been supplied in Column 9 which agrees to the direct sewerage costs in Table 22, Line 9 Column 1. See Table 22 commentary. Direct Costs have increased by circa £0.2M from AIR13.

This is driven by a £0.5M increase in Power due to more accurate coding of sewage pumping stations.

Line 8 – Power costs

The figure for Power costs agrees to Table 22, Line 2 Column 1. See Table 22 commentary. Power costs have increased by £0.5M from AIR13 due to more accurate coding of sewage pumping stations.

Line 9 – Services charges

The figure for Service Charges agrees to Table 22, Line 7 Column 1. The cost for Sewerage is £0.2M which has not changed from AIR13.

Line 10 – General & support

The figure for General & Support costs agrees to Table 22, Line 10 Column 1. See Table 22 commentary and methodology. The cost for Sewerage is £7.4M which has not changed from AIR13.

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 increased by circa £0.2M from AIR13. This is primarily driven by increases in Power Costs as outlined above.

Annex A – Line Methodology for Table 17a Line 4**Line 4 - Total connected properties**

Total properties connected for sewerage services (including voids) at year end.

This figure is taken from the AIR14 Rapid Property Summary.

Total Gross Sewerage Properties	End March 2014
Household - Unmeasured	599315
Household - Sewerage Only	6
Household – Measured - Not Charged (test meters)	295
Household - Measured	28141
Household – Site Meters	525
Household - Unmeasured - Not Charged	0
Non-Household - Unmeasured	15509
Non-Household – Sewerage only	18
Non-Household - Measured	26125
Total	669,934

**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 which fall into the Band 6 category and are to be reported within this submission.

The WWTW to be reported on for AIR14 are:

LIMS Code	LIMS Name	Confirmed PE	AIR12 Band
S34AG	Carrickfergus WWTW	32042	Band 6
S34AK	Belfast WWTW	370779	Band 6
S37AB	Dunmurry WWTW	46458	Band 6
S37AA	Lisburn (New Holland) WWTW	66017	Band 6
S34AD	Newtownbreda WWTW	40003	Band 6
S34AE	Whitehouse WWTW	87914	Band 6
S15AO	Antrim (Milltown) WWTW	65961	Band 6
S13BE	Ballymena (Tullagharley) WWTW	74879	Band 6
S25AC	Dungannon (Moygashel) WWTW	84836	Band 6
S27AC	Newry WWTW	59406	Band 6
S45IB	Omagh WWTW	39927	Band 6
S43CI	Culmore WWTW	131679	Band 6
S17HF	North Coast WWTW	77653	Band 6

Although the PE's for Larne WWTW and Enniskillen WWTW fell below the 25,000PE threshold they had been named on Table 17B for inclusion in the report.

Details of WWTW upgrades within the AIR14 reporting period are:

LIMS Code	LIMS Name	Type of Upgrade	Completion Date
S34AG	Carrickfergus WWTW	None	
S34AK	Belfast WWTW	None	
S37AB	Dunmurry WWTW	None	
S37AA	Lisburn (New Holland) WWTW	None	
S34AD	Newtownbreda WWTW	None	
S15BS	Larne WWTW	None	
S34AE	Whitehouse WWTW	None	
S15AO	Antrim (Milltown) WWTW	None	
S13BE	Ballymena (Tullagharley) WWTW	None	
S25AC	Dungannon (Moygashel) WWTW	None	
S27AC	Newry WWTW	Upgrade scheme	November 2013
S45IB	Omagh WWTW	None	
S43CI	Culmore WWTW	None	
S47HK	Enniskillen WWTW	None	
S17HF	North Coast WWTW	None	

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 95th percentile limits.

No assumptions have been made for the return.

For reference, the works in Band 5 which have the potential to be included in subsequent returns are listed here:

LIMS Code	LIMS Name	Confirmed PE	AIR12 Band
S36AA	Downpatrick	17284	Band 5
S36BB	Kilkeel	12337	Band 5
S36BO	Newcastle	16271	Band 5
S17ED	Ballycastle	11174	Band 5
S15AA	Ballyclare	16750	Band 5
S17BP	Ballymoney (Glenstall)	21810	Band 5
S13CH	Cookstown	19636	Band 5
S13GK	Magherafelt	16090	Band 5
S27AA	Banbridge	22295	Band 5
S25AB	Coalisland	10014	Band 5
S27AN	Tandragee	15527	Band 5
S27AD	Warrenpoint	14723	Band 5
S43GI	Limavady	16211	Band 5
S45JA	Strabane	20691	Band 5
S15BS	Larne WWTW	23211	Band 5
S47HK	Enniskillen WWTW	24977	Band 5

Lines 9-15 - Costs

This table was populated in the same way as AIR13. The costs are a further breakdown by location of the Band 6 expenditure detailed in Table 17f NIW Line 6 is populated with the information available for the year ended 31st March 2014 as at 20th May 2014. The Population Equivalent (PE) information used to complete this table was received by management accounts on 27th May 2014. 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 AIR14 there are 13 works that fall into Band 6 whereas in AIR13 there were 15. Larne and Enniskillen are included in Band 5 in AIR14.

Direct costs have decreased by circa £1.0M from AIR13. £0.6M of this is due to the transfer of Larne and Enniskillen to Band 6. £0.2M is due to reductions in employment costs, power costs have decreased by £0.1M, and the remaining £0.1M is a combination of reduction in contractors, materials and chemical costs across the sites.

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 AIR14 by £0.4M, £0.3M due to the movement of Larne and Enniskillen to Band 6 and £0.1M due to a decrease in tariffs.

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 45:55 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 AIR13 was 42:58 for the Belfast and Incinerators. No costs for the Incinerator have been included in this table in AIR14.

Line 11 – Service charges

Service Charges in AIR14 are reduced marginally due to the transfer of Larne and Enniskillen to Band 6.

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 allocated across all the WWTWs in this table based on Cost Reallocations 611X (this includes direct labours costs & overhead charges). This figure has increased by £0.4M from AIR13. Overall General and Support costs have increased in AIR14 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 in the workings agrees to Table 22 (NIW Only) Column 2 Line 11. Costs have decreased since AIR13 by £0.6M for the reasons mentioned above.

Line 14 – Terminal pumping costs

This information was populated in the same way as AIR13. 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.

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). Since AIR13, PEs for 152 WWTWs have been updated.

Changes regarding WWTWs from the AIR14 period are as follows:

- 2 WWTWs have been rationalised and pumped away/gravity away to larger WWTWs in last financial year.
- 2 WWTWs have been decommissioned.
- 2 WWTWs have been re-designated as private
- 2 WWTWs have been commissioned

This is a net decrease of 4 WWTWs from AIR13 reporting.

We have assumed the Bands to be:

Small works

- a. Size band 1 ≤ 15 kg BOD5/day (population equivalent: 0 - 250)
- b. Size band 2 > 15 but ≤ 30 kg BOD5/day (population equivalent: 251 - 500)
- c. Size band 3 > 30 but ≤ 120 kg BOD5/day (population equivalent: 501 – 2,000)
- d. Size band 4 > 120 but ≤ 600 kg BOD5/day (population equivalent: 2,001 – 10,000)
- e. Size band 5 > 600 but ≤ 1500 kg BOD5/day (population equivalent: 10,001 – 25,000)

It should be noted that the bandings of b, c, d and e above are slightly different from those listed in the NIAUR Chapter 17c guidance, to ensure no duplication of works which may have 250, 500, 2000 or 10,000 PE.

Large works

- f. Size band 6 > 1500 kg BOD5/day (population equivalent: $> 25,000$)

The total number of WWTWs in Table 17c line 7 is the total of all works in this table i.e. 1,024 including the screened outfalls (2 No.) and the unscreened outfalls (7 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 AIR13 NIAUR Chapter 17c guidance also requests the following cross checks to be carried out, which have been completed:

Number of large WWTWs in each treatment category in table 17c (line 6, columns 1-10) should equal corresponding total number of large WWTWs reported in table 17b (line 8).

It should be noted that the AIR14 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 AIR14 comparison between the two figures.

Total Residential Population used to Calculate Table 17c for AIR13	1,249,442
Total Population connected to the sewerage system based on Table 13 Line 10	1,514,925
Difference	265,483

As can be seen there is a difference of 265,483. 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. The non-residential aspect of these PEs have been subtracted from the overall AIR14 PPP PEs (based on the reported AIR14 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)	Residential Population (Based on PPP Equivalent Population)
North Down WWTW	78983	9410	69573
Armagh WWTW	17067	5244	11823
Richhill WWTW	2567	239	2328
Newtownards (Ballyrickard)	40883	10845	30038
Ballynacor WWTW	111400	52095	59305
Kinnegar	78281	32153	46128
Total	329181	109986	219195

As can be seen the residential population for the PPP sites is now approximated to be 219,195. If this is added to the 17c figure (1,249,442) then the total is 1,468,637 which is 46,288 less than the figure held in Table 13. However the figure included Table 13 Line 10 includes both residential population and tourist population. Therefore if the AIR13 tourist population for both NIW sites (33,595PE) and PPP sites (1,964) is included this gives a revised figure of 1,504,196 which is 10,729PE less than the figure held in Table 13, approximately 0.7% less.

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 with the latter 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 696, 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 AIR13 to AIR14

Name of Works	CAR ID	AIR13 Band Sizes	AIR14 Band Sizes	Comment
Aughil (WWTW)	S03006	Band 1		This WWTWs is now a pumpaway for AIR14
Benone (WWTW)	S03026	Band 1		This WWTWs has been decommissioned for AIR14
Bonnanaboigh	S03031	Band 2	Band 1	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Coalisland	S02828	Band 4	Band 5	The PE for this site has been updated with the latest Trade Information for AIR14
Cranfield (Down)	S02721	Band 3	Band 2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Donaghmore (WWTW)	S02840	Band 3	Band 4	The PE for this site has been updated with the latest Trade Information for AIR14
Drumavally	S03087	Band 3		This WWTWs is now a pumpaway to the new Magilligan WWTWs
Dundrum (Down)	S00297	Band 4	Band 3	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Enniskillen	S03218	Band 6	Band 5	The PE for this site has been updated with the latest Trade Information for AIR14
Kilcarn Road(7-9)	S00250	Band 1		This WWTWs has been ben re-designated as a private WWTWs for Alr14
Larne (WWTW)	S02044	Band 6	Band 5	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Moss Road(36-38)	S00853	Band 1		This WWTWs has been ben re-designated as a private WWTWs for Alr14
Mountfield (WWTW)	S03192	Band 3	Band 2	A population study was carried out for this site. This was reviewed and PE

Name of Works	CAR ID	AIR13 Band Sizes	AIR14 Band Sizes	Comment
				adopted for AIR14
Rathlin (Retention Tank)	S00902	Band 1		This WWTWs has been replaced by Rathlin New (WWTWs)
Rathlin Island (New) WWTW	S05624		Band 1	This WWTWs is a new site for AIR14 replacing the old Rathlin WWTWs

It should be highlighted that NIW have 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 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. Also 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 have re-designated the treatment category for 33 WWTWs based on this definition. Changing 22 WWTWs from Sec Act to Ter A2 & 11 from Sec Bio to Ter B2. Details of the sites can be seen in the table below.

The table below highlights the changes in treatment category from AIR13 to AIR14.

Name of Works	CAR ID	AIR13 Treatment Category	AIR14 Treatment Category	Comment
Aghanloo (1)	S02989	Sec Bio	Ter A1	It was confirmed that this WWTWs has Ter Treatment in AIR14.
Annsborough	S02687	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Aughil (WWTW)	S03006	Sec Bio	Pumpaway	This WWTWs is now a pumpaway for AIR14
Ballinmallard (WWTW)	S03010	Sec Bio	Ter B2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Ballybogy	S01087	Sec Bio	Ter B2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5

Name of Works	CAR ID	AIR13 Treatment Category	AIR14 Treatment Category	Comment
Ballycarry	S00267	Sec Bio	Ter B1	It was confirmed that this WWTWs has Ter Treatment in AIR14.
Ballygowan	S00247	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Bellaghy (WWTW)	S01606	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Benone (WWTW)	S03026	Sec Bio	Demolished	This WWTWs has been decommissioned for AIR14
Cargan (WWTW)	S01433	Sec Bio	Ter B1	It was confirmed that this WWTWs has Ter Treatment in AIR14.
Castlecaulfield (WWTW)	S02836	Sec Bio	Ter B2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Clabby (WWTW)	S03051	Sec Bio	Ter B2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Cloughmills (WWTW)	S01096	Sec Bio	Ter B1	It was confirmed that this WWTWs has Ter Treatment in AIR14.
Crossmaglen	S02273	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Derrytrasna	S02402	Ter B1	Sec Bio	It was confirmed there is no Ter Treatment at this site
Dervock (WWTW)	S01102	Sec Bio	Ter B1	It was confirmed that this WWTWs has Ter Treatment in AIR14.
Dromara (WWTW)	S00316	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Dromore (Down)	S02127	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5

Name of Works	CAR ID	AIR13 Treatment Category	AIR14 Treatment Category	Comment
Drumaness (WWTW)	S00293	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Drumavally	S03087	Prim	Pumpaway	This WWTWs is now a pumpaway to the new Magilligan WWTWs
Drumsumn	S03100	Sec Bio	Ter A1	It was confirmed that this WWTWs has Ter Treatment in AIR14.
Dungiven	S03101	Sec Bio	Ter B2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Dunloy	S01108	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Garvagh (WWTW)	S01154	Sec Bio	Ter B2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Glenavy (WWTW)	S04188	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Grange (Taylorstown)	S01442	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Gulladuff (WWTW)	S01619	Ter B1	Ter B2	This WWTWs was upgraded in AIR14
Hamiltonsbawn	S02603	Sec Act	Ter A2	It was confirmed that this WWTWs has Ter Treatment in AIR14.
Irvinestown	S03137	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Kilcarn Road(7-9)	S00250	Prim	Private	This WWTWs has been ben re-designated as a private WWTWs for Air14
Killinchy (WWTW)	S00252	Sec Bio	Ter B2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Kircubbin (WWTW)	S04881	Ter A2	Sec Act	It was confirmed there is no Ter Treatment at this site

Name of Works	CAR ID	AIR13 Treatment Category	AIR14 Treatment Category	Comment
Loughguile	S01115	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Loughries	S00230	Sec Bio	Ter B2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Magilligan Point Road WWTW	S05593		Ter A2	This WWTWs is a new site for AIR14 and replaces Benone, Drumavally and Augil
Meigh (WWTW)	S02277	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Monea (WWTW)	S03186	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Moneyreagh (WWTW)	S00337	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Moss Road(36-38)	S00853	Prim	Private	This WWTWs has been ben re-designated as a private WWTWs for Alr14
Mounthill	S01465	Sec Act	Sec Bio	This WWTWs was upgraded in AIR14
Mountjoy (Dungannon)	S02849	Sec Bio	Ter B2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Mullans (Antrim)	S01118	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Newcastle (WWTW)	S00303	Sec Act	Ter A2	It was confirmed that a WWTWs has Ter Treatment in AIR14.
Newtownhamilton	S02282	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Nixons Corner (WWTW)	S03203	Sec Bio	Ter B2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5

Name of Works	CAR ID	AIR13 Treatment Category	AIR14 Treatment Category	Comment
Pomeroy (WWTW)	S01593	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Poyntzspass (WWTW)	S02156	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Rathfriland (WWTW)	S02713	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Rathlin (Retention Tank)	S00902	Sea Out Unscreen	Decommissioned	This WWTWs has been replaced by Rathlin New (WWTWs)
Rathlin Island (New) WWTW	S05624		Sec Bio	This WWTWs is a new site for AIR14 replacing the old Rathlin WWTWs
Stewartstown	S01599	Sec Bio	Ter B1	It was confirmed that this WWTWs has Ter Treatment in AIR14.
Stoneyford (WWTW)	S00328	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Stranocum	S01123	Sec Bio	Ter B1	It was confirmed that this WWTWs has Ter Treatment in AIR14.
Tamnaherin	S03226	Sec Bio	Ter B2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5
Thorney Glen	S00284	Ter A1	Sec Bio	This WWTWs was upgraded in AIR14
Waringstown	S02423	Sec Act	Ter A2	Plant designated as having Tertiary Treatment due to an ammonia consent less than or equal to 5

Difference between AIR13 and AIR14 for total in Table 17c (column 11, row 7)

Total Number of Works for AIR 13 -	1,028
Total Number of Works for AIR 14 -	1,024
Total Difference -	4

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 AIR13 to present are summarised below:

Line	Nr AIR13	Nr AIR14	Difference	Comment
8	44	45	1	3 new sites- Ravernet, Darkley & Enniskillen 2 sites removed – Gulladuff & Magherafelt
9	54	60	6	7 new sites- Ballygowan, Carrowdore, Gulladuff, Magherafelt, Keady (Armagh), Hillsborough & Meigh 1 site removed – Moira

PPP**Lines 1-6**

There are no changes to the PPP sewage works treatment categories.

Line 9

There are no changes to the PPP sewage works treatment categories

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 14 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 (PPP Only)**

DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11	CG	
			TREATMENT CATEGORY										TOTAL		
			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 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				154							154	B3
5	Load received by STWs in size band 5	kg BOD5/day	0					1,024						1,024	B3
B LARGE WORKS															
6	Load received by STWs in size band 6	kg BOD5/day	0		4,697			13,876						18,573	B3
7	Total loads rec'd (daily average all size bands)	kg BOD5/day	0		4,697		154	14,900						19,751	B3
C SMALL WORKS WITH AMMONIA CONSENTS															
8	Load rec'd by small STW w. NH3 consent (5 - 10mg/l)	kg BOD5/day	0											0	
9	Load rec'd by small STW w. NH3 consents (< = 5mg/l)	kg BOD5/day	0											1,178	

Table 17d - Sewage Treatment Works 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 Population Equivalents minus the allowance for the tourist population. Since AIR13, PEs for 152 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. Hence the loads reported in this table include the non-resident population.

1,028 WWTWs were reported on in Table 17d for AIR13. Hence there has been an overall net reduction of 4 in the number of WWTWs being reported from AIR13 to AIR14, which is summarised as follows:

- 2 WWTWs (Aughil & Drumavally) were pumped to other works,
- 2 WWTWs (Rathlin (RT) & Benone) have been decommissioned,
- 2 WWTWs (Kilcarn Rd (7-9) & Moss Rd (36-38)) have been designated as private,
- 2 WWTWs (Magilligan Point Road & Rathlin Island (New)) have been commissioned,

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 AIR13 these have been removed from the Trade Effluent Submission. For the majority of hospitals 5% of hospital discharges has been included due to discharges from x-ray departments and bathing pools. The exceptions are Antrim & Altnagelvin hospitals where 7% and 32.6% respectively of hospital discharges have been included. Also it was highlighted that Ulster Hospital trade figure is based on 5% of total discharge plus an additional 100m³/day for laundry volume. The AIR11 Trade Information, for nursing homes and clinics, has been maintained for AIR14 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 for AIR13. This figure has been updated for AIR14 with the latest trade information giving a new figure of 370779. 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 two main projects involved are:

Glenmachan Sewers Project & Compliance with the Surface Water (Shellfish) Regs (NI) – Belfast Lough

The outcomes of these projects are likely to influence the PE for Belfast for AIR15.

We have assumed the Bands to be:

Small works

- a. size band 1 ≤ 15 kg BOD5/day (population equivalent: 0 - 250)
- b. size band 2 >15 but ≤ 30 kg BOD5/day (population equivalent: 251 - 500)
- c. size band 3 >30 but ≤ 120 kg BOD5/day (population equivalent: 501 – 2,000)
- d. size band 4 >120 but ≤ 600 kg BOD5/day (population equivalent: 2,001 –10,000)
- e. size band 5 >600 but ≤ 1500 kg BOD5/day (population equivalent: 10,001 – 25,000)

Large works

- f. size band 6 > 1500 kg BOD5/day. (population equivalent: $> 25,000$)

It should be noted that the bandings of b, c, d and e above are slightly different from those listed in the NIAUR Chapter 17c guidance, to ensure no duplication of works which may have 250, 500, 2000 or 10,000 PE.

The total number of WWTWs in Table 17c line 7 is the total of all NIW only works in this table i.e. 1,024 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 which should be deducted from a particular WWTW due to population commuting out of 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 AIR13, as although the PE confidence grade is still C5 (due to the mainly theoretical derivation) there is greater confidence in the process categories for the WWTWs, which warrants the raising of grade from C5 to C3.

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 Killeel WWTWs and therefore the sample is still not large enough to extrapolate.

It should be noted that PEs have been updated at 84 WWTWs based on population reports and Flow & Load were carried out at 24 of these sites. However NIWs Flow & Load group felt the population reports were more representative of the PE for various reasons such as the inability of the flow measurement devices to accurately measure low flows.

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 43no. WWTWs included in the table.

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	Difference* *(-ve indicates AIR13 figure larger)	Comments
Arney (WWTW)	S02999	174	212	-38	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Augher (WWTW)	S03005	770	558	212	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Aughil (WWTW)	S03006	109	Pump away	109	This WWTWs is now a pumpaway for AIR14
Ballee Road (75-83)	S04091	9	7	2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballycastle (WWTW)	S01071	14006	11174	2832	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballycranbeg	S00218	362	275	87	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballygawley (WWTW)	S03013	1486	1237	249	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballykelly (L/Derry)	S03016	4827	3618	1209	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	Difference* *(-ve indicates AIR13 figure larger)	Comments
Bankside Shinn	S02692	71	82	-11	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Benone (WWTW)	S03026	3347	Decommissioned	3347	This WWTWs is now a pumpaway for AIR14
Bolea (WWTW)	S03030	93	113	-20	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Carrowdore	S00236	1054	1440	-386	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Castleberg (WWTW)	S03042	4858	3931	927	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Charlestown	S02399	76	102	-26	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Darkley (WWTW)	S02569	368	438	-70	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Diamond cottages(1)	S01772	30	43	-13	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Drumavally	S03087	608	Pump away	608	This WWTWs is now a pumpaway to the new Magilligan WWTWs
Dundrum (Down)	S00297	2613	1674	939	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dunserverick (Retention Tank)	S01185	89	50	39	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	Difference* *(-ve indicates AIR13 figure larger)	Comments
Ferris Bay (50)	S04084	15	11	4	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Kilcarn Road(7-9)	S00250	6	Private	6	This WWTWs has been ben re-designated as a private WWTWs for Alr14
Kilkeel (WWTW)	S00313	10587	12337	-1750	A Flow & Load study was carried out for this site and PE adopted for AIR14
Killeter (WWTW)	S03144	161	125	36	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Killinchy (WWTW)	S00252	5811	3363	2448	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Kilskeery	S03148	60	47	13	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Larne (WWTW)	S02044	28116	23211	4905	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Legacurry (Down)	S00321	124	158	-34	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Longs Glebe	S01160	78	55	23	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Magilligan Point Road WWTW	S05593	Under Construction	5674	-5674	This WWTWs is a new site for AIR14 and replaces Benone, Drumavalley and Augil

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	Difference* *(-ve indicates AIR13 figure larger)	Comments
McKinley Park	S02276	45	54	-9	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Milltown (Aghory)	S02593	237	179	58	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Monea (WWTW)	S03186	373	306	67	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moss Road(36-38)	S00853	3	Private	3	This WWTWs has been ben re-designated as a private WWTWs for Air14
Mountain View (Drumintee)	S02278	113	71	42	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Newtownbutler (WWTW)	S03200	1731	1285	446	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Rathlin (Retention Tank)	S00902	117	Decommissioned	117	This WWTWs has been replaced by Rathlin New (WWTWs)
Rathlin Island (New) WWTW	S05624	Under Construction	117	-117	This WWTWs is a new site for AIR14 replacing the old Rathlin WWTWs
Stewartstown	S01599	1104	1360	-256	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
The Oyster Yard WWTW	S05533	60	45	15	Actual PE for this site updated following an On-Site house count by APT
Thorney Glen	S00284	50	58	-8	A population study was carried out for this site. This was reviewed and PE adopted for AIR14

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	Difference* *(-ve indicates AIR13 figure larger)	Comments
Trench Road (66-70)	S04118	9	11	-2	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Tullyroan	S02600	61	37	24	The PE for this site has been updated with the latest Trade Information for AIR14

*(-ve indicates AIR13 figure larger)

It should be highlighted that NIW have 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 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. Also 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 have re-designated the treatment category for 33 WWTWs based on this definition. Changing 22 WWTWs from Sec Act to Ter A2 & 11 from Sec Bio to Ter B2. Details of the sites can be seen the commentary table for Table 17c.

The total load of 110173.8 kg BOD/day from all NIW (only) WWTWs reconciles with the Total load entering sewerage system (BOD/year) of 40213.42 t BOD/year, from Table 15 line 5.

The Total load receiving primary treatment in table 17d (line 7, column 1) of 750.4 kg BOD/day is consistent (allowing for rounding up/down and conversions) with total load receiving primary treatment in table 15 (line 3) of 273.89 t BOD/yr.

The Total load receiving secondary and tertiary treatment in table 17d (line 7, sum of columns 2–7) i.e. 107289.3 kg BOD/day is consistent with total load receiving secondary treatment in table 15 (line 2) i.e. 39160.58 t BOD/yr.

The Total load receiving preliminary treatment in table 17d (line 7, column 8) of 1,738.1 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 634.4 t BOD/yr.

The table below depicts changes in PEs at WWTWs from AIR13 to AIR14.

The following table depicts how PE changes have occurred at WWTWs during the last financial year.

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	Difference*	AIR13 Band	AIR14 Band	Band Size Change
Annalong (WWTW)	S00300	3242	3135	107	Band 4	Band 4	
Annsborough	S02687	5877	5967	-90	Band 4	Band 4	
Antrim (WWTW)	S01422	66254	65961	293	Band 6	Band 6	
Ardglass (WWTW)	S00268	2826	2824	2	Band 4	Band 4	
Ardstraw (WWTW)	S02997	285	319	-34	Band 2	Band 2	
Arney (WWTW)	S02999	174	212	-38	Band 1	Band 1	
Augher (WWTW)	S03005	770	558	212	Band 3	Band 3	
Aughil (WWTW)	S03006	109	Pump away	109	Band 1		Y
Aughnacloy	S03007	1900	1614	286	Band 3	Band 3	
Ballee Road (75-83)	S04091	9	7	2	Band 1	Band 1	
Ballintoy (Retention Tank)	S01174	360	332	28	Band 1	Band 1	
Ballybogy	S01087	648	577	71	Band 3	Band 3	
Ballycarry	S00267	2116	2193	-77	Band 4	Band 4	
Ballycastle (WWTW)	S01071	14006	11174	2832	Band 5	Band 5	
Ballyclare	S01467	16488	16750	-262	Band 5	Band 5	
Ballycranbeg	S00218	362	275	87	Band 2	Band 2	
Ballygawley (WWTW)	S03013	1486	1237	249	Band 3	Band 3	
Ballygowan	S00247	3363	3372	-10	Band 4	Band 4	
Ballykelly (L/Derry)	S03016	4827	3618	1209	Band 4	Band 4	
Ballykinler (WWTW)	S00299	2257	2260	-3	Band 4	Band 4	
Ballymena (WWTW)	S01456	82830	74879	7951	Band 6	Band 6	
Ballynahinch (Down)	S00311	7942	7943	-1	Band 4	Band 4	
Ballywhiskin (Retention Tank)	S00827	1132	1141	-9	Band 2	Band 2	
Banbridge (WWTW)	S02102	22380	22295	85	Band 5	Band 5	
Bankside Shinn	S02692	71	82	-11	Band 1	Band 1	
Belfast (WWTW)	S00345	365000	370779	-5779	Band 6	Band 6	
Belleek (Fermanagh)	S03024	1755	1756	-1	Band 3	Band 3	
Benone (WWTW)	S03026	3347	Decommissioned	3347	Band 1		Y
Bolea (WWTW)	S03030	93	113	-20	Band 1	Band 1	

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	Difference*	AIR13 Band	AIR14 Band	Band Size Change
Bonnanaboigh	S03031	255	219	36	Band 2	Band 1	Y
Bready (WWTW)	S03971	305	301	4	Band 2	Band 2	
Cabragh (WWTW)	S02834	575	577	-2	Band 3	Band 3	
Carrickfergus (WWTW)	S00261	32026	32042	-16	Band 6	Band 6	
Carrowdore	S00236	1054	1440	-386	Band 3	Band 3	
Castle Archdale (WWTW)	S03041	809	849	-40	Band 1	Band 1	
Castledearg (WWTW)	S03042	4858	3931	927	Band 4	Band 4	
Charlestown	S02399	76	102	-26	Band 1	Band 1	
Clady (Tyrone)	S04149	761	760	1	Band 3	Band 3	
Clogher (WWTW)	S03056	1294	1184	110	Band 3	Band 3	
Coalisland	S02828	9877	10014	-137	Band 4	Band 5	Y
Cookstown (WWTW)	S01582	19824	19636	188	Band 5	Band 5	
Cranfield (Down)	S02721	3915	4140	-225	Band 3	Band 2	Y
Culcrow	S01146	143	159	-16	Band 1	Band 1	
Culmore (WWTW)	S03071	133823	131679	2144	Band 6	Band 6	
Darkley (WWTW)	S02569	368	438	-70	Band 2	Band 2	
Dernaflaw	S03072	347	394	-47	Band 2	Band 2	
Derryhale	S02570	1117	1124	-7	Band 3	Band 3	
Dervock (WWTW)	S01102	967	986	-19	Band 3	Band 3	
Diamond cottages(1)	S01772	30	43	-13	Band 1	Band 1	
Donaghmore (WWTW)	S02840	2000	2042	-42	Band 3	Band 4	Y
Donemana	S03103	815	818	-3	Band 3	Band 3	
Donnybrewer	S03080	5213	5214	-1	Band 4	Band 4	
Downpatrick (WWTW)	S00771	17372	17284	88	Band 5	Band 5	
Draperstown	S01615	3275	3263	12	Band 4	Band 4	
Dromara (WWTW)	S00316	1380	1379	1	Band 3	Band 3	
Dromore (Down)	S02127	7355	7384	-29	Band 4	Band 4	
Drumaness (WWTW)	S00293	2609	2420	189	Band 4	Band 4	
Drumavally	S03087	608	Pump away	608	Band 3	#N/A	Y

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	Difference*	AIR13 Band	AIR14 Band	Band Size Change
Drumilly	S02268	60	53	7	Band 1	Band 1	
Drumlough	S00320	115	116	-1	Band 1	Band 1	
Dundrum (Down)	S00297	2613	1674	939	Band 4	Band 3	Y
Dungannon	S02850	78942	84836	-5894	Band 6	Band 6	
Dungiven	S03101	4759	4743	16	Band 4	Band 4	
Dunmullan	S03102	58	63	-5	Band 1	Band 1	
Dunmurry	S00346	45888	46458	-570	Band 6	Band 6	
Dunserverick (Retention Tank)	S01185	89	50	39	Band 1	Band 1	
Edenderry (Tyrone)	S03104	58	55	3	Band 1	Band 1	
Ederney (WWTW)	S03106	823	858	-35	Band 3	Band 3	
Enniskillen	S03218	26537	24977	1560	Band 6	Band 5	Y
Ferris Bay (50)	S04084	15	11	4	Band 1	Band 1	
Fincarn	S03111	85	87	-2	Band 1	Band 1	
Fivemiletown (WWTW)	S03113	2163	2109	54	Band 4	Band 4	
Garrison (WWTW)	S03115	701	663	38	Band 3	Band 3	
Glenstall	S01109	21219	21810	-591	Band 5	Band 5	
Gortaclady (WWTW)	S01575	17	18	-1	Band 1	Band 1	
Greenisland (WWTW)	S00263	9617	9627	-10	Band 4	Band 4	
Greysteel (WWTW)	S03123	2192	2196	-4	Band 4	Band 4	
Hilltown (WWTW)	S02701	2143	2170	-27	Band 4	Band 4	
Katesbridge	S02136	134	128	6	Band 1	Band 1	
Keady (Armagh)	S02553	4573	4576	-3	Band 4	Band 4	
Kesh (WWTW)	S03140	2678	2682	-4	Band 3	Band 3	
Kilcarn Road(7-9)	S00250	6	Private	6	Band 1	#N/A	Y
Kilkeel (WWTW)	S00313	10587	12337	-1750	Band 5	Band 5	
Killeen (Armagh)	S02294	97	106	-9	Band 1	Band 1	
Killeter (WWTW)	S03144	161	125	36	Band 1	Band 1	
Killinchy (WWTW)	S00252	5811	3363	2448	Band 4	Band 4	
Killough (Retention Tank)	S00275	1445	1511	-66	Band 3	Band 3	

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	Difference*	AIR13 Band	AIR14 Band	Band Size Change
Killygonlan (WWTW)	S02043	1138	1303	-165	Band 3	Band 3	
Killyleagh (WWTW)	S00273	8072	7228	844	Band 4	Band 4	
Kilmore (Down)	S00285	420	397	23	Band 2	Band 2	
Kilrea	S01156	2799	2578	221	Band 4	Band 4	
Kilross	S01622	74	72	2	Band 1	Band 1	
Kilskeery	S03148	60	47	13	Band 1	Band 1	
Larne (WWTW)	S02044	28116	23211	4905	Band 6	Band 5	Y
Legacurry (Down)	S00321	124	158	-34	Band 1	Band 1	
Limavady (WWTW)	S03162	16194	16211	-17	Band 5	Band 5	
Lisburn (New Holland)	S00329	67199	66017	1182	Band 6	Band 6	
Lisnadill (WWTW)	S02586	22	21	1	Band 1	Band 1	
Lisnaskea (WWTW)	S03171	6392	6391	1	Band 4	Band 4	
Longs Glebe	S01160	78	55	23	Band 1	Band 1	
Loughries	S00230	262	280	-18	Band 2	Band 2	
Macosquin	S01161	851	810	41	Band 3	Band 3	
Maghera (L/Derry)	S01629	6583	6586	-3	Band 4	Band 4	
Magherafelt (WWTW)	S01621	15933	16090	-157	Band 5	Band 5	
Magilligan Point Road WWTW	S05593	Under Construction	5674	-5674		Band 4	
Markethill	S02591	2526	2529	-3	Band 4	Band 4	
McCandless Terrace	S02150	36	33	3	Band 1	Band 1	
McKinley Park	S02276	45	54	-9	Band 1	Band 1	
Meigh (WWTW)	S02277	950	1024	-74	Band 3	Band 3	
Milltown (Aghory)	S02593	237	179	58	Band 1	Band 1	
Moira	S02429	5085	5144	-59	Band 4	Band 4	
Monea (WWTW)	S03186	373	306	67	Band 2	Band 2	
Moneydig	S01167	61	60	1	Band 1	Band 1	
Moneymore (WWTW)	S01589	2828	2829	-1	Band 4	Band 4	
Moneyreagh (WWTW)	S00337	2380	2386	-6	Band 4	Band 4	

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	Difference*	AIR13 Band	AIR14 Band	Band Size Change
Moneyscalp	S02710	21	23	-2	Band 1	Band 1	
Moneyslane (WWTW)	S02151	380	427	-47	Band 2	Band 2	
Moss Road(36-38)	S00853	3	Private	3	Band 1	#N/A	Y
Mountain View (Drumintee)	S02278	113	71	42	Band 1	Band 1	
Mountfield (WWTW)	S03192	521	479	42	Band 3	Band 2	Y
Mountnorris	S02248	998	889	109	Band 3	Band 3	
Moy (WWTW)	S02859	3448	3696	-248	Band 4	Band 4	
Newcastle (WWTW)	S00303	16263	16271	-8	Band 5	Band 5	
Newry (WWTW)	S02685	58276	59406	-1130	Band 6	Band 6	
Newtownbreda (WWTW)	S00342	40002	40003	-1	Band 6	Band 6	
Newtownbutler (WWTW)	S03200	1731	1285	446	Band 3	Band 3	
Newtownstewart (WWTW)	S03202	2170	2168	2	Band 4	Band 4	
North Coast (WWTWs)	S04150	76357	77653	-1296	Band 6	Band 6	
Omagh (WWTW)	S03999	38720	39927	-1207	Band 6	Band 6	
Poyntzspass (WWTW)	S02156	813	816	-3	Band 3	Band 3	
Priestland	S01169	85	72	13	Band 1	Band 1	
Rathlin (Retention Tank)	S00902	117	Decommissioned	117	Band 1	#N/A	Y
Rathlin Island (New) WWTW	S05624	Under Construction	117	-117		Band 1	Y
Robinsonstown	S02419	581	532	49	Band 3	Band 3	
Roughfort (WWTW)	S01470	439	442	-3	Band 2	Band 2	
Seahill (WWTW)	S00774	6795	6796	-1	Band 4	Band 4	
Stewartstown	S01599	1104	1360	-256	Band 3	Band 3	
Stoneyford (WWTW)	S00328	680	695	-15	Band 3	Band 3	
Strabane	S03223	20305	20691	-386	Band 5	Band 5	
Straid (Ballymena)	S01455	53	51	2	Band 1	Band 1	
Tamnamore (WWTW)	S02862	617	632	-15	Band 3	Band 3	
Tandragee	S02174	13659	15527	-1868	Band 5	Band 5	
The Oyster Yard WWTW	S05533	60	45	15	Band 1	Band 1	

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	Difference*	AIR13 Band	AIR14 Band	Band Size Change
Thorney Glen	S00284	50	58	-8	Band 1	Band 1	
Trench Road (66-70)	S04118	9	11	-2	Band 1	Band 1	
Trillick (WWTW)	S03231	602	603	-1	Band 3	Band 3	
Tullyroan	S02600	61	37	24	Band 1	Band 1	
Victoria Bridge (WWTW)	S03236	561	503	58	Band 3	Band 3	
Waringsford	S02166	206	224	-18	Band 1	Band 1	
Waringstown	S02423	6333	7230	-897	Band 4	Band 4	
Warrenpoint (WWTW)	S02720	14707	14723	-16	Band 5	Band 5	
Whitehouse	S00265	87958	87914	44	Band 6	Band 6	
			Total	4535			

*(-ve indicates AIR13 figure larger)

The change in PE equates to a decrease in load of 272.1kg BOD/day (i.e. 4535 x 0.06 for 60g/hd/day) from AIR13 to AIR14

Difference between AIR14 and AIR13 for the total load entering WWTWs as shown in Table 17d - column 11, row 7

Total Load Received at WWTWs for AIR13 -	110445.9
Total Load Received at WWTWs for AIR 14 -	110173.8
Total Difference -	272.1

The interpretation of the treatment categories is as below:-

AIR13 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
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

AIR13 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 AIR13 to AIR14.

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	PE Change *	Comments
Clogher (WWTW)	S03056	1294	1184	110	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Darkley (WWTW)	S02569	368	438	-438	This WWTWs is an addition to the WWTWs list with Ammonia between 5-10
Derryhale	S02570	1117	1124	-7	The PE for this site has been updated with the latest Trade Information for AIR14
Donaghmore (WWTW)	S02840	2000	2042	-42	The PE for this site has been updated with the latest Trade Information for AIR14
Draperstown	S01615	3275	3263	12	The PE for this site has been updated with the latest Trade Information for AIR14

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	PE Change *	Comments
Ederney (WWTW)	S03106	823	858	-35	A population study was carried out for this site. This was reviewed and PE adopted for AIR14 This WWTWs was within Band 6 within AIR13
Enniskillen	S03218	26537	24977	-24977	
Gulladuff (WWTW)	S01619	517	517	517	This WWTWs has been removed from the WWTWs list with Ammonia between 5-10
Hilltown (WWTW)	S02701	2143	2170	-27	The PE for this site has been updated with the latest Trade Information for AIR14
Kesh (WWTW)	S03140	2678	2682	-4	The PE for this site has been updated with the latest Trade Information for AIR14
Lisnaskea (WWTW)	S03171	6392	6391	1	The PE for this site has been updated with the latest Trade Information for AIR14
Macosquin	S01161	851	810	41	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Maghera (L/Derry)	S01629	6583	6586	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Magherafelt (WWTW)	S01621	15933	16090	15933	This WWTWs has been removed from the WWTWs list with Ammonia between 5-10
Markethill	S02591	2526	2529	-3	The PE for this site has been updated with the latest Trade Information for AIR14
Mountnorris	S02248	998	889	109	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Newtownstewart (WWTW)	S03202	2170	2168	2	The PE for this site has been updated with the latest Trade Information for AIR14
Ravarnet	S00319	609	609	-609	This WWTWs is an addition to the WWTWs list with Ammonia between 5-10

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	PE Change *	Comments
Robinsonstown	S02419	581	532	49	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Strabane	S03223	20305	20691	-386	The PE for this site has been updated with the latest Trade Information for AIR14
			Total	-9757	

*(-ve Indicates AIR14 PE Higher)

The change in PE equates to an increase in load of 585.5kg/d (i.e. 9757 x 0.06 for 60g/hd/day) from AIR13 to AIR14, for line 8.

Total Load rec'd by small WWTWs with NH3 consents (5-10mg/l) for AIR13-	5775.7
Total Load rec'd by small WWTWs with NH3 consents (5-10mg/l) for AIR14-	6361.2
Total Difference –	-585.5

Changes in Line 9 - Small works with ammonia consent (between 0 and 5) from AIR13 to AIR14.

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	PE Change*	Comments
Annsborough	S02687	5877	5967	-90	The PE for this site has been updated with the latest Trade Information for AIR14
Ballybogy	S01087	648	577	71	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballyclare	S01467	16488	16750	-262	The PE for this site has been updated with the latest Trade Information for AIR14
Ballycranbeg	S00218	362	275	87	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Ballygowan	S00247		3372	-3372	This WWTWs is an addition to the WWTWs list with Ammonia <=5
Ballynahinch (Down)	S00311	7942	7943	-1	The PE for this site has been updated with the latest Trade Information for AIR14

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	PE Change*	Comments
Banbridge (WWTW)	S02102	22380	22295	85	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Carrowdore	S00236		1440	-1440	This WWTWs is an addition to the WWTWs list with Ammonia <=5
Coalisland	S02828	9877	10014	-137	The PE for this site has been updated with the latest Trade Information for AIR14
Cookstown (WWTW)	S01582	19824	19636	188	The PE for this site has been updated with the latest Trade Information for AIR14
Downpatrick (WWTW)	S00771	17372	17284	88	The PE for this site has been updated with the latest Trade Information for AIR14
Dromara (WWTW)	S00316	1380	1379	1	The PE for this site has been updated with the latest Trade Information for AIR14
Dromore (Down)	S02127	7355	7384	-29	The PE for this site has been updated with the latest Trade Information for AIR14
Drumaness (WWTW)	S00293	2609	2420	189	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Dungiven	S03101	4759	4743	16	The PE for this site has been updated with the latest Trade Information for AIR14
Gulladuff (WWTW)	S01619		517	-517	This WWTWs is an addition to the WWTWs list with Ammonia <=5
Hillsborough (WWTW)	S00323		4034	-4034	This WWTWs is an addition to the WWTWs list with Ammonia <=5
Keady (Armagh)	S02553		4576	-4576	This WWTWs is an addition to the WWTWs list with Ammonia <=5
Killinchy (WWTW)	S00252	5811	3363	2448	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Limavady (WWTW)	S03162	16194	16211	-17	The PE for this site has been updated with the latest Trade Information for AIR14
Loughries	S00230	262	280	-18	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Magherafelt (WWTW)	S01621		16090	-16090	This WWTWs is an addition to the WWTWs list with Ammonia <=5

Name of Works	CAR ID	AIR13 Actual PE	AIR14 Actual PE	PE Change*	Comments
Meigh (WWTW)	S02277		1024	-1024	This WWTWs is an addition to the WWTWs list with Ammonia <=5
Moira	S02429	5085		5085	This WWTWs has been removed from the WWTWs list with Ammonia <=5
Monea (WWTW)	S03186	373	306	67	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Moneymore (WWTW)	S01589	2828	2829	-1	The PE for this site has been updated with the latest Trade Information for AIR14
Moneyreagh (WWTW)	S00337	2380	2386	-6	The PE for this site has been updated with the latest Trade Information for AIR14
Mountfield (WWTW)	S03192	521	479	42	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Newtownbutler (WWTW)	S03200	1731	1285	446	A population study was carried out for this site. This was reviewed and PE adopted for AIR14. The Trade PE was also updated for AIR14
Poyntzspass (WWTW)	S02156	813	816	-3	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Stoneyford (WWTW)	S00328	680	695	-15	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Tandragee	S02174	13659	15527	-1868	The PE for this site has been updated with the latest Trade Information for AIR14
Waringstown	S02423	6333	7230	-897	A population study was carried out for this site. This was reviewed and PE adopted for AIR14
Total				-25584	

*(-ve Indicates AIR14 PE Higher)

The change in PE equates to an increase in load of 1535.04 kg/d (i.e. 25584 x 0.06 for 60g/hd/day) from AIR13 to AIR14 for line 9.

Total Load rec'd by small WWTWs with NH3 consents (0-5mg/l) for AIR13-	12796.6
Total Load rec'd by small WWTWs with NH3 consents (0-5mg/l) for AIR14-	14331.6
Total Difference -	-1535

PPP

Lines 1 – 7

The variation in load data from AIR 13 is solely due to the variation in influent loads received by the same PPP works from the NI Water catchments over the AIR 14 Period.

Line 9

The variation in load data is due to the variation in influent loads received by the Richhill STW and Armagh STW over the AIR 14 Period.

Specific company commentary;

- There have been no changes to the number of PPP operated STW's in each Treatment Category
- There are currently the following Capital Works Project plans to close, or divert flows arriving to, PPP operated works.
- There are currently a number of Capital Works Projects proposed in PPP catchments;

KS935 College Ave Shandon Drive Bangor Storm Sewer

KS879 Bangor DAP Package 4

KS875 Bangor DAP Package 6

KS930 Millisle DAP Stage 2

KR558 Hollywood Sewer Catchment Investigations Phase 2

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	52.930	143.643	661.355	0.000	0.000	3.541	13.020	0.000	0.000	6.562	881.051
2	Direct costs of STWs in size band 2	£000	3	0.000	71.182	254.051	44.925	15.066	59.946	99.284	27.521	18.128	0.000	590.103
3	Direct costs of STWs in size band 3	£000	3	8.780	563.478	704.371	170.721	467.209	213.552	166.314	12.607	0.000	7.449	2,314.480
4	Direct costs of STWs in size band 4	£000	3	38.197	962.188	357.222	55.920	1,449.624	100.785	321.580	85.881	32.945	0.000	3,404.341
5	Direct costs of STWs in size band 5	£000	3	0.000	433.326	0.000	281.680	2,032.134	0.000	176.314	75.535	0.000	0.000	2,998.988
B LARGE WORKS														
6	Direct costs of STWs in size band 6	£000	3	0.000	3,192.779	0.000	725.471	1,758.463	0.000	0.000	0.000	0.000	0.000	5,676.713
C ALL WORKS														
7	Total direct costs of STWs - all sizes	£000	3	99.907	5,366.595	1,976.999	1,278.716	5,722.496	377.824	776.511	201.544	51.074	14.011	15,865.678
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	99.907	5,366.595	1,976.999	1,278.716	5,722.496	377.824	776.511	201.544	51.074	14.011	15,865.678
10	Sewage Treatment: Power costs	£000	3	19.793	3,524.129	533.798	694.664	3,372.369	100.432	260.338	80.241	9.085	0.000	8,594.849
11	Sewage Treatment: service charges	£000	3	8.963	192.086	147.482	55.931	227.652	26.917	52.183	24.310	7.330	2.532	745.386
12	Sewage Treatment: General and Support	£000	3	86.008	2,461.570	2,657.911	797.792	2,886.578	531.539	556.996	52.494	15.287	11.938	10,058.112
13	Sewage Treatment: Functional Expenditure	£000	3	185.914	7,828.165	4,634.910	2,076.508	8,609.074	909.364	1,333.507	254.038	66.360	25.949	25,923.789

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 17f SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - COSTS (PPP only)**

				1	2	3	4	5	6	7	8	9	10	11		
DESCRIPTION				TREATMENT CATEGORY										TOTAL		
				UNITS	DP	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													
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				42.615							42.615		
5	Direct costs of STWs in size band 5	£000	3				0.000	147.196						147.196		
B LARGE WORKS																
6	Direct costs of STWs in size band 6	£000	3					1,982.019						1,982.019		
C ALL WORKS																
7	Total direct costs of STWs - all sizes	£000	3				42.615	2,129.215						2,171.830		
8	Sludge Treatment and Disposal Adjustments	£000	3													
9	Sewage Treatment: Direct costs	£000	3				42.615	2,129.215						2,171.830		
10	Sewage Treatment: Power costs	£000	3				42.615	2,129.215						2,171.830		
11	Sewage Treatment: service charges	£000	3													
12	Sewage Treatment: General and Support (NIW)	£000	3					31.573	28.268	113.071				172.912		
13	Sewage Treatment: Functional Expenditure	£000	3					31.573	70.883	2,242.286				2,344.742		

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	52.930	143.643	661.355	0.000	0.000	3.541	13.020	0.000	0.000	6.562	881.051
2	Direct costs of STWs in size band 2	£000	3	0.000	71.182	254.051	44.925	15.066	59.946	99.284	27.521	18.128	0.000	590.103
3	Direct costs of STWs in size band 3	£000	3	8.780	563.478	704.371	170.721	467.209	213.552	166.314	12.607	0.000	7.449	2,314.480
4	Direct costs of STWs in size band 4	£000	3	38.197	962.188	357.222	98.535	1,449.624	100.785	321.580	85.881	32.945	0.000	3,446.956
5	Direct costs of STWs in size band 5	£000	3	0.000	433.326	0.000	281.680	2,179.330	0.000	176.314	75.535	0.000	0.000	3,146.184
B LARGE WORKS														
6	Direct costs of STWs in size band 6	£000	3	0.000	3,192.779	0.000	725.471	3,740.482	0.000	0.000	0.000	0.000	0.000	7,658.732
C ALL WORKS														
7	Total direct costs of STWs - all sizes	£000	3	99.907	5,366.595	1,976.999	1,321.331	7,851.711	377.824	776.511	201.544	51.074	14.011	18,037.508
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	99.907	5,366.595	1,976.999	1,321.331	7,851.711	377.824	776.511	201.544	51.074	14.011	18,037.508
10	Sewage Treatment: Power costs	£000	3	19.793	3,524.129	533.798	737.279	5,501.584	100.432	260.338	80.241	9.085	0.000	10,766.679
11	Sewage Treatment: service charges	£000	3	8.963	192.086	147.482	55.931	227.652	26.917	52.183	24.310	7.330	2.532	745.386
12	Sewage Treatment: General and Support	£000	3	86.008	2,493.143	2,657.911	826.060	2,999.649	531.539	556.996	52.494	15.287	11.938	10,231.024
13	Sewage Treatment: Functional Expenditure	£000	3	185.914	7,859.738	4,634.910	2,147.391	10,851.360	909.364	1,333.507	254.038	66.360	25.949	28,268.531

Table 17f - Sewage Treatment Works (NIW only)**Lines 1-13**

An updated Population Equivalent (PE) database with treatment type by WWTW's was sent from Asset Management on the 27th May 2014 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. Larne & Enniskillen were in Band 6 for AIR13 and are in Band 5 in AIR14. Coalisland was included in Band 4 in AIR13 and is in Band 5 in AIR14.

Table 17f has been completed based on the figures available at for the year ended 31st March 2014 as at 20th May 2014 for sewage treatment – Activity 510 less M & E expenditure which is treated as general & support.

Small works**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 AIR13 by circa £0.2M due to improvement allocation of costs to each individual WWTW's through the use of Cost to Serve.

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. Ballycastle is not separately identifiable with a W finance location code for, it is included under X25 – Ballymena Area, however, with the use of EAM and the cost to serve project the majority of costs for Ballycastle can be separately identified using CAR ID. Larne and Enniskillen are included in Size Band 5 in AIR14. These WWTW's were included in Band 6 in AIR13. Coalisland was included in Band 4 in AIR13 and is in Band 5 in AIR14.

The costs against this line have increased by circa £0.7M, £0.4M in power and £0.3M in other direct costs. This is a result of the inclusion of the three additional sites Larne, Enniskillen and Coalisland.

Large works

Line 6 – Size band 6

This line agrees with Line 9 in Table 17b. No PPP sites have been included.

The costs have decreased from AIR13 by circa £1.0M. £0.6M of this is due to the transfer of Larne and Enniskillen to Band 6, £0.2M is due to reductions in employment costs. Power costs have decreased by £0.1M and the remaining £0.1M is a combination of reduction in contractors, materials and chemical costs across the sites.

Power costs for TPS that are intrinsically connected to the works cannot be separately identified as there is only one electric metre. Ballymena has been noted separately and is included in the power costs in this table.

All works

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 AIR13 by circa £0.6M. This is primarily due to a decrease in employment costs and power costs as mentioned earlier.

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 taken from EAM to get the full year power cost per WWTW's. In total the power figure included as sewage treatment is £8.6M which is in line with AIR13. This figure agrees with Table 22, Column 2 Line 2.

Line 11 – Service charges

£0.7M of environmental regulatory charges are included in Sewage, in line with AIR13.

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 £3.0M from AIR13. Overall General and Support costs have increased in AIR14 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 from AIR13 by circa £2.5M for all the reasons mentioned under the lines above. Refer to Table 22 commentary for further explanation.

PPP Only**Lines 1- 3 – Size bands 1- 3**

There are no PPP sites sized within these categories. Therefore, this is a nil return for these size bands.

Line 4 – Size band 4

Direct costs associated with Richhill (TA1) include power costs only derived from the Oracle system using the appropriate location code.

Line 5 – Size band 5

Direct costs associated with Armagh (TA2) include power costs only derived from the Oracle system using the appropriate location code.

Line 6 – Size band 6

No costs are reported for Kinnegar (SAS) direct costs as Kinnegar power costs are part of the Concessionaire's payment to the Operating Company.

Costs for North Down, Ballyrickard and Ballinacor (all TA2) include power costs only derived from the Oracle system using appropriate location codes.

Line 9 - Direct costs

This refers to power only. See comments on Line 10 below.

Line 10 - Power

Kinnegar (SAS) remains unreported as power costs are not incurred by NIW directly but through the Concessionaire payments. This is consistent between AIR13 and AIR 14.

Power costs have reduced from AIR13 as a result of reduced power consumption in 2013/14.

The total of this line reconciles to table 22 line 2 column 2.

Line 12 – General & support

General and support costs have been calculated using all staff and overhead costs for the contracts management team together with PPP related professional managed service costs – PPP Professional Advisors. Costs have been attributed to schemes in accordance with management's estimated time spent by each member of staff on each contract, with such costs spread equally on schemes therein. Professional Advisors costs are attributable to a contract by invoice. General and support costs have been allocated to facilities on a straight line basis according to the number of facilities in each scheme.

The total on this line reconciles to table 22 line 10 column 2.

Lines 1-13 - Consolidated - NIW Total

Table 17f has been completed based on the figures available for the year ended 31st March 2014 as at 20th May 2014.

The figures in Column 11 in the NIW Total table agree with Table 22(NIW Total) Column 2.

Refer to commentary on NIW only and PPP only individual tables for explanation of changes from AIR13. The main changes are covered in the NIW only commentary.

NIW only plus PPP only equals NIW Total.

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		2		3		4		5		6		7		8		9		10	
			FARMLAND UNTREATED	CG	FARMLAND CONVENTIONAL	CG	FARMLAND ADVANCED	CG	INCINERATION	CG	TO PPP	CG	LANDFILL	CG	COMPOSTED	CG	LAND RECLAMATION	CG	OTHER	CG	TOTAL	CG
1 Resident population served	000	1								1450.3	C3	36.6	C3								1,486.9	C3
2 Amount of sewage sludge	ttds	1								31.7	A2	0.8	B2								32.5	B2
3 Sludge treatment: direct costs	£000	3								0.000		0.000								2,483.387	2,483.387	
4 Sludge disposal: direct costs	£000	3								2,651.132		159.208								0.000	2,810.340	
5 Sludge treatment & disposal: direct costs	£000	3								2,651.132		159.208								2,483.387	5,293.727	
6 Sludge treatment & disposal: power costs	£000	3								0.000		0.000								1,414.683	1,414.683	
7 Sludge treatment & disposal: service charges	£000	3								0.000		0.000								183.075	183.075	
8 Sludge treatment & disposal: general & support exp.	£000	3								1,248.736		0.000								1,073.791	2,322.526	
9 Sludge treatment & disposal: functional expenditure	£000	3								3,899.867		159.208								3,557.178	7,616.253	

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 Table 17a Line 1 as required in the Utility Regulator's guidance documentation.

Line 1 Column 5 and Column 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 2013/14 (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 C480.

Lines 3-9

The methodology has not changed from AIR13. 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 31st March 2014 as at 20th May 2014.

Line 3 – Sludge treatment: direct costs

Expenditure has been input in Column 9. The costs have remained consistent with AIR13 and the direct costs relating to Sludge Treatment in AIR14 are £2.5M.

Sludge treatment costs for WWTW's are coded using activity 621 and can be separately identified to populate Column 9.

Power costs in AIR14 do not include the Incinerator or any PPP sites.

Line 4 - Sludge disposal: direct costs

Columns 5 and 6 have been populated in this line. Total direct costs have decreased by circa £0.2M from AIR13. This is mainly due to a reduction in employment costs.

There is a small increase in Column 6, grit & screening and has been based on volumes disposed of to Landfill through the C480 contract.

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 £0.2M from AIR13, primarily due to the reduction in employment costs as mentioned above.

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 managers 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 AIR13 was 42:58 and in AIR14 is 45:55 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 AIR13. Power costs have remained consistent with AIR13.

Line 7 - Sludge treatment & disposal: service charges

The Service Charges figure is £0.2M in AIR14 and is consistent with AIR13. 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 AIR13. Overall General and Support costs have increased from AIR13. 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 remained consistent with AIR13.

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
				2010-11	2011-12	2012-13	2013-14
DESCRIPTION		UNITS	DP				
1	Turnover	£m	3	345.740	354.819	366.398	361.313
2	Operating costs (excluding HCD)	£m	3	-212.643	-200.677	-202.316	-209.933
3	Historical cost depreciation	£m	3	-41.689	-46.216	-44.871	-48.580
4	Operating income	£m	3	0.108	0.212	0.334	0.276
5	Operating profit	£m	3	91.516	108.138	119.545	103.076
6	Other income	£m	3	0.000	0.000	0.000	0.000
7	Net interest receivable less payable	£m	3	-47.520	-50.468	-55.067	-48.580
8	Profit on ordinary activities before taxation	£m	3	43.996	57.670	64.478	54.496
9	Current tax	£m	3	0.000	0.000	0.000	0.000
10	Deferred tax	£m	3	-31.433	-18.472	-24.872	13.798
11	Profit on ordinary activities after taxation	£m	3	12.563	39.198	39.606	68.294
12	Extraordinary items	£m	3	0.000	0.000	0.000	0.000
13	Profit for the year	£m	3	12.563	39.198	39.606	68.294
14	Dividends	£m	3	-35.570	-25.604	-26.587	-21.391
15	Retained profit for the year	£m	3	-23.007	13.594	13.019	46.903

Table 18 – HC Profit and Loss account for the year ending 31 March 2014

- 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 2013/14 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	18.156*	-	(1.473)	(1.516)	3.258	18.425
Omega	25.834	(3.129)	-	-	-	22.705
Kinnegar	2.447	(0.256)	-	-	-	2.191
Total	46.437	(3.385)	(1.473)	(1.516)	3.258	43.321

* includes lease interest of £6.933m – shown in line 7 of Table 18.

- PPP elements of line 2 'Operating Costs' are £33.130m. Additionally within Line 3 'HCD' there are depreciation costs for the Alpha Project of £3.258m.
- The current tax charge is zero and this is explained as follows:

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 UK generally accepted accounting principles (UKGAAP). 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.

The income tax credit in the statutory accounts for the period is £14.884m which is lower than the charge based on the standard rate of corporation tax in the UK (23%). The differences are explained below:

Reconciliation of effective tax rate	£m
Profit for the year	153.341
Income tax expense	<u>(14.884)</u>
Profit before income tax	<u>138.457</u>
Income tax using the Company's domestic tax rate (23%)	31.845
Reduction in tax rate	(25.858)
Non deductible expenses	0.520
Adjustment to prior years	<u>(21.391)</u>
	<u>(14.884)</u>

The deferred tax credit in line 10 of £13.798m is based on the statutory accounts deferred tax credit of £14.884m less an allocation of £1.086m deferred tax to unappointed activities.

The statutory accounts income tax credit of (£14.884m) can be shown as follows:

Tax recognised in profit and loss	£m
Current tax expense	
Current year	(0.266)
Adjustment for prior years	<u>(0.282)</u>
	(0.548)
Deferred Tax	
(Origination) and reversal of temporary differences	(10.726)
Reduction in tax rate from 23% to 20%	<u>26.158</u>
	<u>15.432</u>
Total income tax expense	<u>14.884</u>

The statutory current tax charge of (£0.548m) relates wholly to unappointed activities (aerial site income and rental income) and therefore line 9 in Table 18 shows zero for appointed activities.

The allocation of the statutory deferred tax credit of £15.432m to appointed and unappointed can be shown as follows:

Appointed activities	£13.798m
Unappointed activities	£ 1.634m
Total	£15.432m

The approach to the allocation of deferred tax to unappointed activities has been amended for the year end 31st March 2014. Prior to the year end 31st March 2014 an amount of the annual statutory deferred tax charge was allocated to unappointed activities based on the approximate net profit before tax for these activities using the relevant tax rate. It has now been decided that a more appropriate approach would be to allocate all the deferred tax to appointed activities since the temporary tax timing differences associated with the deferred tax charge/credit reside in this part of the business.

It was also decided to apply this policy retrospectively by allocating an amount of deferred tax to unappointed activities in the year end 31st March 2014 that would eliminate the brought forward liability of deferred tax on unappointed activities at 31st March 2013 which was £1.634m.

This policy will be followed from now on and there will be no allocation of deferred tax to unappointed activities from year end 31st March 2015 (inclusive).

Line 10 of Table 18 therefore shows a credit of £13.798m which is the balance of the statutory credit of £15.432m after adopting the revised approach to unappointed activities detailed above.

Table 19 shows a deferred tax liability on the balance sheet of £173.693m (with zero balance at 31st March 2014 for unappointed activities in line with the revised approach). This liability under UKGAAP reconciles to the IFRS based statutory accounts balance at 31st March 2014 of £174.389m as the IFRS Accounts are required to show the deferred tax charge associated with the pension asset (£0.696m) within the deferred tax balance rather than the UKGAAP approach of showing this amount separately within the pension account. The statutory balance of £174.389m can be summarised as follows:

	2013-14 £m Excluding Pension	2013-14 £m Pension	2013-14 £m Total
Opening liability	189.050	(1.231)	187.819
Current year deferred tax charge/ (credit) to profit and loss account	32.372	0.028	32.400
Current year deferred tax charge/ (credit) to profit and loss account (effect of tax rate)	(26.054)	(0.104)	(26.158)
Prior year deferred tax (credit)/charge to P&L	(21.674)	-	(21.674)
Current year deferred year tax charge to the Statement of Total Recognised Gains and Losses	0.000	2.003	2.003
Closing liability	<u>173.693</u>	<u>0.696</u>	<u>174.389</u>

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:

	2013-14 £m
Benefit obligation at end of year	(167.513)
Fair value of plan assets at end of year	<u>170.993</u>
Net asset	3.480
Less deferred tax	<u>(0.696)</u>
Pension asset after deferred tax	<u>2.784</u>

The actuarial assumptions underpinning the FRS 17 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-14	31-Mar-13
Discount rate	4.60%	4.40%
Rate of compensation increase	4.30%	4.40%
Rate of increase in pensions in payment	3.30%	3.40%
Rate of increase in pensions in deferment	3.30%	3.40%
Inflation	3.40%	3.40%

Weighted average assumptions used to determine net pension cost for year ended:

31-Mar-14 31-Mar-13

Discount rate	4.40%	5.00%
Rate of compensation increase	4.40%	4.25%
Rate of increase in pensions in payment	3.40%	3.25%
Inflation	3.40%	3.25%

Any changes to the assumptions from 2013 to 2014 have been advised by the independent actuaries.

There is a pension asset at 31 March 2014 of £2.784m (after deferred tax). Contributions to the fund in 2013/14 were 26.9% of pensionable pay. (2012/13: 26.9%).

A dividend of £29.046m was proposed, approved and paid in 2013/14 and thus there is a dividend in Table 18 for the current year.

The approach to the allocation of dividend to unappointed activities has been amended for the year end 31st March 2014. Prior to the year end 31st March 2014 an amount of the annual dividend was allocated to unappointed activities based on the relative turnover.

It has now been decided that a more appropriate policy would be to allocate an amount of dividend to unappointed activities in the year that reduces the ongoing build up of cash balances within the unappointed balance sheet.

Thus in the year ended 31st March 2014 £21.391m of the statutory dividend of £29.046m was allocated to appointed activities and £7.655m 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	(209.933)
Add back HC amortisation of grants and contributions	(0.820)
Less CC amortisation of grants and contributions	2.488
Less CC depreciation	(109.803)
Table 20 line 2	(318.068)

Cost components in Operating Costs

The following cost components of Line 2 (£209.933m) exceed £5m in 2013-14:

Wages and Salaries	40.112m ^{*^}
Other pension costs	11.848m [*]
Electricity	32.006m [*]
Rates	12.811m [*]
Contractors	18.729m [*]
Out sourced billing	6.672m
PPP Operating Charges –Alpha	8.234m
PPP Operating Charges –Omega	22.705m ^{^^}
Total	153.117m

(72.9% of total Operating Costs)

* includes an amount relating to unappointed activities.

^ 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	0.112	
Total Interest received		0.112
Interest Payable:		
On bonds held as security	(0.053)	
On all other loans	(41.406)	
On PPP finance lease	(6.933)	
On Pension Fund	(0.300)	
Total Interest Payable		(48.692)
Net Interest		(48.580)

Capitalisation of costs

During 2013/14 £11.621m of costs were capitalised from the profit and loss account. This can be broken down as follows:

Cost	£m
Staff Costs	9.759
Labour charge	0.046
Vehicles and plant	0.037
Overheads capitalised	1.724
Other	0.055
Total	11.621

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 PC13

A comparison to 2012/13 and to PC13 can be shown as follows:

	Actual	Actual	PC13
	2013 -2014	2012 -2013	2013 -2014
	£m	£m	£m
Sales	361.313	366.398	356.826
Expenditure	(258.237)	(246.853)	(247.573)
Net Operating Profit	103.076	119.545	109.253
Operating Margin	28.5%	32.6%	30.6%
Interest payable	(48.580)	(55.067)	(58.965)
Deferred tax	13.800	(24.872)	(11.566)

Profit for the year	68.296	39.606	38.722
Net Profit Margin	<i>18.9%</i>	<i>10.8%</i>	<i>10.9%</i>

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				1		2		3		4			
				UNITS		DP		2010-11		2011-12		2012-13	
A	CAPITAL EXPENDITURE CATEGORIES												
1	Profit for the year	£m	3			12.563	39.198	13.019	46.903				
2	Actuarial gains/losses on post employment plans	£m	3			1.160	1.456	-11.535	8.012				
3	Other gains and losses	£m	3			0.000	0.000	0.000	0.000				
4	Total recognised gains and losses for the year	£m	3			13.723	40.654	1.484	54.915				

Table 18c – STRGL (HCA)

Line 2 shows £8.012m of actuarial gains/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 UKGAAP the actuarial gain noted above of £8.012m is taken from the IFRS statutory accounts. This is the first year for NIW that the UKGAAP and IFRS approaches on accounting for pension costs have differed. The IFRS approach was used in the Regulatory Accounts for the following reasons:

- The primary difference in IFRS and 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 gain had been calculated in line with UKGAAP rather than IFRS the actuarial gain charged directly to reserves (through the STRGL) would have been approximately £1.2m lower and the pension costs charged to the profit and loss account would have been approximately £1.2m lower. 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 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	2	3	4
				2010-11	2011-12	2012-13	2013-14
A DIVIDEND ANALYSIS							
1	Dividends in respect of a financial re-organisation	£m	3	0.000	0.000	0.000	0.000
2	Other ordinary dividends	£m	3	-35.570	-25.604	-26.587	-21.391
3	Total dividends	£m	3	-35.570	-25.604	-26.587	-21.391
B INTEREST ANALYSIS							
4	Interest receivable/payable on intercompany balances	£m	3	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
6	Indexation element of index-linked bonds	£m	3	0.000	0.000	0.000	0.000
7	Preference share dividends	£m	3	0.000	0.000	0.000	0.000
8	Other interest receivable	£m	3	0.214	0.109	0.134	0.112
9	Other interest payable	£m	3	-35.519	-39.983	-44.137	-41.459
10	Other finance charges - post employment costs	£m	3	0.000	1.156	0.849	-0.300
11	Other finance charges	£m	3	-12.215	-11.750	-11.913	-6.933
12	Total net interest	£m	3	-47.520	-50.468	-55.067	-48.580

Table 18d – Analysis of dividends and interest charges

There has been no financial reorganisation during the year.

A dividend was proposed and approved in 2013/14 and this is shown on line 2. The full dividend for 2013/14 was £29.046m with £21.391m apportioned to appointed activities and £7.655m 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 (£0.112m) relates to monies held on deposit.

Interest payable of £41.459m is comprised of £41.406m relating to the loan notes held with DRD and £0.053m relating to interest payable on cash bonds. The interest on loan notes has decreased from last year by £2.697m (6.1%). This decrease is the product of additional interest on the drawdown of £29m additional loan notes in 2013/14 and the release of an accrual held at 31st March 2013. (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).

Other finance cost is £0.300m for the finance cost relating to post employment plans calculated by the actuaries of the pension fund at year end.

During 2013/14 an amount of £6.933m (2012/13: £11.913m) has been included as other finance charges. This relates to the imputed interest on the finance lease underpinning the on balance sheet Alpha PPP Project.

The following table compares the actual net interest payable and balance of loan notes with the 2013/14 budget and PC13:

	Actual	Budget	PC13
	£m	£m	£m
Net Interest payable	41.406	47.691	46.675
Loan notes	911.560	952.560	973.005

The drawdown of loans is £61.445m less than the PC13 projected for 2013/14. 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)

DESCRIPTION	UNITS	DP	1	2	3	4
			2010-11	2011-12	2012-13	2013-14
A FIXED ASSETS						
1 Tangible fixed assets	£m	3	1713.802	1822.992	1907.525	1994.848
2 Investment - loan to group company	£m	3	0.000	0.000	0.000	0.000
3 Investment - other	£m	3	0.106	0.106	0.106	0.091
4 Total fixed assets	£m	3	1713.908	1823.098	1907.631	1994.939
B CURRENT ASSETS						
5 Stocks	£m	3	1.863	2.177	2.379	2.021
6 Debtors	£m	3	28.797	33.783	28.824	27.167
7 Cash	£m	3	-3.272	-2.340	9.102	1.637
8 Short term deposits	£m	3	15.000	0.000	5.300	0.600
9 Infrastructure renewals prepayment	£m	3	0.000	2.734	3.341	0.050
10 Total current assets	£m	3	42.388	36.354	48.946	31.475
C CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR						
11 Overdrafts	£m	3	0.000	0.000	0.000	0.000
12 Infrastructure renewals accrual	£m	3	-3.044	0.000	0.000	0.000
13 Creditors	£m	3	-113.610	-120.598	-118.022	-124.404
14 Borrowings	£m	3	0.000	0.000	0.000	0.000
15 Corporation tax payable	£m	3	0.000	0.000	0.000	0.000
16 Ordinary share dividends payable	£m	3	0.000	0.000	0.000	0.000
17 Preference share dividends payable	£m	3	0.000	0.000	0.000	0.000
18 Total creditors	£m	3	-116.654	-120.598	-118.022	-124.404
19 Net current assets	£m	3	-74.266	-84.244	-69.076	-92.929
D CREDITORS: AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR						
20 Borrowings	£m	3	-737.560	-807.560	-882.560	-911.560
21 Other creditors	£m	3	-102.624	-98.978	-96.187	-95.302
22 Total creditors	£m	3	-840.184	-906.538	-978.747	-1006.862
E PROVISION FOR LIABILITIES AND CHARGES						
23 Deferred tax provision	£m	3	-144.282	-162.493	-187.416	-173.693
24 Deferred income - grants and contributions	£m	3	-17.723	-18.657	-19.456	-19.785
25 Post employment asset / (liabilities)	£m	3	4.586	7.253	-4.123	2.784
26 Other provisions	£m	3	-19.349	-20.679	-9.589	-10.315
F PREFERENCE SHARE CAPITAL						
27 Preference share capital	£m	3	0.000	0.000	0.000	0.000
28 Net assets employed	£m	3	622.690	637.740	639.224	694.139
G CAPITAL AND RESERVES						
29 Called up share capital	£m	3	500.000	500.000	500.000	500.000
30 Share premium	£m	3	0.000	0.000	0.000	0.000
31 Profit and loss account	£m	3	-49.000	-33.950	-32.466	22.449
32 Other reserves	£m	3	171.690	171.690	171.690	171.690
33 Capital and reserves	£m	3	622.690	637.740	639.224	694.139

Table 19 – HC Balance Sheet as at 31 March 2014

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 £46.903m (post dividend).

The P&L reserves in the Balance Sheet increased by £54.915m and this movement can be shown as follows:

Retained profit for the year	£46.903m
Pension scheme actuarial gain net of deferred tax	£ 8.012m
Movement in P&L Account	£54.915m

The company has adopted International Financial Reporting Standards (IFRS) in its statutory accounts for the year end 31st March 2014. The regulatory accounts will continue to be produced under 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.

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	115.590 *	15.594	2.972	134.156
Acc. Deprec	(18.730)	-	-	(18.730)
NBV	96.860	15.594	2.972	115.426

* Includes the original capital value of Alpha PPP (£111.708m), 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	1.672	-	-	-	1.672
Accruals	3.004	18.361	0.275	-	21.640
Total	4.676	18.361	0.275	-	23.312

Line 21 - Other creditors falling due after more than one year

	Alpha
	£m
Lease obligation due > 1 yr	94.388

Line 26 - Other provisions

	Omega
	£m
Provisions	7.553

Significant features and movements**Fixed Assets**

Increase of £87m in line with in year additions of £232m, capital contributions of £65m, depreciation of £82m, disposals of £1m and a decrease in the infrastructure prepayment of £3m.

Debtors

Decreased by £1.657m from £28.824m to £27.167m (5.7%). This is primarily due to:

- Measured, unmeasured and TE debtors increased by £2.3m
- Accrued income from measured and TE customers decreased by £1.6m.
- Rechargeable debtors decreased by £0.2m.
- VAT receivable debtors decreased by £3.0m.
- Measured, unmeasured and TE bad debt provision increased by £0.2m.
- Rechargeables bad debt provision increased by £0.05m.
- Prepayments increased by £0.2m.
- Miscellaneous accrued income increased by £0.2m

Cash and Short term deposits

Cash has decreased by £7.465m from £9.102m to £1.637m (82.0%) and Short term deposits have decreased by £4.700m from £5.300m to £0.6m (88.7%).

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	£158m
Net Interest paid	£ 51m
Dividend paid	£ 21m
PPP Lease payments	£ 2m
Total	£232m

Funded by:

Generated from operations	£191m
Loans	£ 29m
Decrease in cash	£ 7m
Decrease in deposit monies	£ 5m
Total	£ 232m

Deferred tax

The deferred tax balance has decreased from £187.416m to £173.693m. An explanation for this has been included in the commentary to Table 18.

Borrowings > 1 year

Borrowings have increased by £29m from £882.56m to £911.56m. The additions to capital expenditure during the year were £232.0m. 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 £4.123m became a Pension asset of £2.784m (a change in value of 167.5%).

This can be shown as follows:

	£m
Opening balance at 1.4.13	(4.123)
Current Service Costs	(11.200)
Administration Costs	(0.648)
Past Service Costs	(0.457)
Contributions	11.424
Finance Cost	(0.300)
Actuarial Gain	10.015
Increase in Deferred tax on asset	(1.927)
Closing balance 31.3.14	2.784

Other provisions

Increased from £9.589m to £10.315m (7.6%).

This increase of £0.726m can be summarised as follows:

	£m
Increase in Public and Employer Liability claims	0.241
Transfer to accruals re: Environmental provision	(0.500)
Increase in Contractor claims	1.000
Decrease in early retirement provision	(0.015)
Total	0.726

**PPP – Infrastructure renewals charge (IRC) and expenditure (IRE)
– Capital Maintenance**

The table below summarises the IRC, IRE and capital maintenance during 2013/14 in relation to the PPP projects:

	Alpha	Omega	Kinnegar	Total
	£m	£m	£m	£m
IRE	-	-	-	-
IRC	-	-	-	-
Capital maintenance	1.483	-	-	1.483

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 2013-14 this is confirmed by the operator to be £1,483k. This amount is credited to the Profit and Loss account and debited to Alpha fixed assets.

This capital maintenance is assumed to be 100% non infrastructure and there are no infrastructure additions to Alpha in 2013-14 (2012-13: nil). There has therefore been no apportionment of IRC in 2013-14 (2012-13: 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.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 19a ANALYSIS OF BORROWINGS DUE AFTER MORE THAN ONE YEAR (HISTORICAL COST ACCOUNTING)
BALANCE SHEET AS AT 31 MARCH

1	2	3	4	5	6	7	8	9
DESCRIPTION	YEARS TO MATURITY	PRINCIPAL SUM	Years to maturity x principle sum	REAL COUPON	NOMINAL INTEREST RATE	FULL YEAR EQUIVALENT NOMINAL INTEREST COST	FULL YEAR EQUIVALENT REAL CASH INTEREST PAYMENT	CARRYING VALUE
	years 0dp	£m 3dp	£m 3dp	% 2dp	% 2dp	£m 3dp	£m 3dp	£m 3dp
A BORROWINGS IN HEDGING RELATIONSHIPS								
A1 Fixed rate instruments								
1								
-								
50								
A2 Floating rate instruments								
51								
-								
100								
A3 Index linked instruments								
101								
-								
150								
TOTAL FOR HEDGING INSTRUMENTS								
B BORROWINGS DESIGNATED AT FAIR VALUE THROUGH PROFIT AND LOSS								
B1 Fixed rate instruments								
151								
-								
200								
B2 Floating rate instruments								
201								
-								
250								
B3 Index linked instruments								
251								
-								
300								
TOTAL FOR BORROWINGS DESIGNATED AT FAIR VALUE THROUGH PROFIT AND LOSS								
C OTHER BORROWINGS								
C1 Fixed rate instruments								
301		627.560	8158.280	2.80%	5.25%	32.947	32.947	627.560
302		20.000	260.000	2.58%	5.03%	1.006	1.006	20.000
303		20.000	260.000	2.44%	4.89%	0.978	0.978	20.000
304		20.000	260.000	2.03%	4.48%	0.896	0.896	20.000
305		10.000	130.000	2.68%	5.13%	0.513	0.513	10.000
306		10.000	130.000	2.71%	5.16%	0.516	0.516	10.000
307		10.000	130.000	2.82%	5.27%	0.527	0.527	10.000
308		20.000	260.000	2.60%	5.05%	1.010	1.010	20.000
309		5.000	65.000	2.35%	4.80%	0.240	0.240	5.000
310		15.000	195.000	1.94%	4.39%	0.659	0.659	15.000
311		7.000	91.000	1.05%	3.50%	0.245	0.245	7.000
312		10.000	130.000	0.92%	3.37%	0.337	0.337	10.000
313		15.000	195.000	1.17%	3.62%	0.543	0.543	15.000
314		18.000	234.000	1.23%	3.68%	0.662	0.662	18.000
315		8.000	104.000	1.19%	3.64%	0.291	0.291	8.000
316		8.000	104.000	0.91%	3.36%	0.269	0.269	8.000
317		5.000	65.000	0.77%	3.22%	0.161	0.161	5.000
318		20.000	260.000	0.61%	3.06%	0.612	0.612	20.000
319		10.000	130.000	0.68%	3.13%	0.313	0.313	10.000
320		24.000	312.000	0.77%	3.22%	0.773	0.773	24.000
321		5.000	65.000	1.54%	3.99%	0.200	0.200	5.000
322		8.000	104.000	1.65%	4.10%	0.328	0.328	8.000
323		5.000	65.000	1.50%	3.95%	0.198	0.198	5.000
324		11.000	143.000	1.46%	3.91%	0.430	0.430	11.000
325								
C2 Floating rate instruments								
351								
-								
400								
C3 Index linked instruments								
401								
-								
450								
TOTAL FOR OTHER BORROWINGS								
D TOTALS		911.560	11850.280			44.653	44.653	911.560
E RPI assumption 2.45%								
F ANALYSIS								
F1 INDICATIVE INTEREST RATES								
F1	Nominal interest			4.90%				
F2	Cash interest			4.90%				
G INDICATIVE DEBT PORTFOLIO BREAKDOWN								
G1	Floating rate debt as percentage of total debt			0%				
G2	Fixed rate debt as percentage of total debt			100%				
G3	Index linked debt as percentage of total debt			0%				
G4	Fixed rate debt and index linked debt as percentage of total debt			100%				
G5	Weighted average years to maturity			13				

Table 19a – Analysis of Borrowings due after more than One Year

At 31 March 2014 NIW borrowings related to Capital Loan notes issued under a £1,280,200,000 Fixed Coupon Unsecured Loan note 2027. Further loan notes may be issued under this facility in the period to 31 March 2016. This facility is available to provide finance for capital investment only.

The loan note subscription agreement 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 2013/14 Capital loan notes were accounted for as held to maturity borrowings.

In addition to the capital loan note instrument NIW has a committed facility available in a £20m overdraft facility. In 2013/14 NIW also had access to a £55m Revolving Credit Facility (RCF). The £55m RCF expired on 31 March 2014. Neither facility were utilised during 2013/14.

The **Overdraft facility**, for £20m, provides financing for working capital requirements of NIW. This is available until 31 March 2016 at a cost of Libor + 0.35%.

Other than for column 8 the calculated cells match the guidance definitions.

Column 8 requests details of the full year equivalent cash interest payment. For fixed rate instruments this should be copied from the full year equivalent nominal interest. However the guidance indicates that this is in column 6 whereas it is detailed in column 7. The information disclosed was copied from column 7.

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)

				1	2	3	4
				2010-11	2011-12	2012-13	2013-14
DESCRIPTION		UNITS	DP				
1	Turnover	£m	3	345.740	354.819	366.398	361.313
2	Current cost operating costs (including CCD & IRC)	£m	3	-341.824	-355.177	-349.470	-343.723
3	Operating income	£m	3	0.079	-0.285	0.303	0.208
4	Working capital adjustment	£m	3	4.898	2.824	2.641	2.001
5	Current cost operating profit	£m	3	8.893	2.181	19.872	19.799
6	Other income	£m	3	0.000	0.000	0.000	0.000
7	Net interest receivable less payable	£m	3	-47.520	-50.468	-55.067	-48.580
8	Financing adjustment	£m	3	40.427	30.450	30.464	23.962
9	Current cost profit before taxation	£m	3	1.800	-17.837	-4.731	-4.819
10	Current tax	£m	3	0.000	0.000	0.000	0.000
11	Deferred tax	£m	3	-31.433	-18.472	-24.872	13.798
12	Current cost profit on ordinary activities	£m	3	-29.633	-36.309	-29.603	8.979
13	Extraordinary items	£m	3	0.000	0.000	0.000	0.000
14	Current cost profit attributable to shareholders	£m	3	-29.633	-36.309	-29.603	8.979
15	Dividends	£m	3	-35.570	-25.604	-26.587	-21.391
16	Current cost profit retained	£m	3	-65.203	-61.913	-56.190	-12.412

Table 20 – CC Profit and Loss account for year ending 31 March 2014

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	18.156	0.000	(1.473)	(1.516)	4.033	19.200
Omega	25.834	(3.129)	0.000	0.000	0.000	22.705
Kinnegar	2.447	(0.256)	0.000	0.000	0.000	2.191
Total	46.437	(3.385)	(1.473)	(1.516)	4.033	44.096

* includes lease interest of £6.933m.

Line 7 Net interest receivable less payable includes £6.933m interest payable on Alpha PPP finance lease.

Comparison with prior year results

	2013-2014	2012-2013	Variance
	£m	£m	%
Turnover	361.313	366.398	(1.4)%
CC Operating profit	19.799	19.872	(0.4)%
CC profit/(loss) attributable to shareholders	8.979	(29.603)	130.3%
Dividends	(21.391)	(26.587)	(24.3)%
CC (loss) retained	(12.412)	(56.190)	77.9%

Sales have decreased in 2014 by £5.085m (1.4%) due to:

- Decrease in unmeasured household income (£4.800m)
- Decrease in unmeasured non-household income (£0.383m)
- Increase in measured non-household income £1.719m
- Decrease in trade effluent income (£0.437m)
- Decrease in road drainage income (£0.862m)
- Decrease in large user income (£0.360m)
- Increase in other income £0.038m
- Total decrease (£5.085m)**

(see Table 23 for detail on water and sewerage income changes)

Operating costs have fallen by £5.747m (1.6%) over the same period and the overall impact is that the CC operating profit margin has risen from 5.4% to 5.5%. As in previous years the overall focus on cost reduction throughout the business has continued during 2013-14 although operating costs before taking account of IRC, CCD and amortisation

have risen by £5.0m from £172.3m to £177.3m (2.9%). However the fall in CCD of £15.4m (from £150.9m to £135.5m) has led to an overall rise in the operating margin. Some of the main changes in operating costs in 2014 include:

- Employment costs have decreased by £2.6m (10.3%)
- Rates costs have decreased by £1.6m (11.3%)
- General and support costs have risen by £3.5m (10.8%)
- PPP Unitary charges have risen by £4.8m (16.9%).
- CCD has fallen by £15.4m (10.2%)*.

*The CCD has fallen as a result of a reduction in the level of decommissioning in 2013-14 compared to 2012-13.

The loss attributable to shareholders has reduced in 2013-14 by £43.778m due mostly to:

- Operating costs decrease by £5.747m.
- Net interest payable down by £6.5m.
- Deferred tax has moved from a charge of £24.9m to a credit of £13.8m reducing costs year on year by £38.7m.
- Decrease in dividend of £5.196m.

Offset by:

- Sales decrease of £5.085m.
- Working capital and financing adjustments decreased by £7.1m (although remain credit items).

There was a dividend declared and approved for 2012/13 of £29.046m (accounted for in 2013-14) with £21.391m attributed to appointed activities.

Cost components in Operating Costs

The following cost components of Line 2 (£343.723m) exceed £5m in 2013-14:

Wages and Salaries	40.112m ^{*^}
Other pension costs	11.848m [*]
Electricity	32.006m [*]
Rates	12.811m [*]
Contractors	18.729m [*]
Out sourced billing	6.672m
PPP Operating Charges – Alpha	8.234m
PPP Operating Charges –Omega	22.705m ^{^^}
IRC	33.409m
Current cost depreciation	135.458m
Total	321.984m
	(93.7% 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 2013/14 and 2012/13 can be summarised as follows:

	2013-14	2012-13
Number	7 ^{*^}	18 [*]
Non pension element	£0.055m	£0.169m
Pension element	£0.457m	£1.639m
Total	£0.512m	£1.808m

* including 4 ill health retirees (2012/13- 5).

^ including 1 individual from 2012-13 scheme.

Voluntary Severance (VS) Scheme

The VS schemes in 2013/14 and 2012/13 can be summarised as follows:

	2013-14	2013-14	2013-14	2012-13	2012-13	2012-13
	VS Under 55	VS 60+	Total	VS Under 55	VS 60+	Total
Number	6	9	15	27	18	45
Total	£0.464m	£0.208m	£0.672m	£1.608m	£0.391m	£1.999m

The future VER/VS schemes are still to be finalised.

The total costs, payments and accruals for VER and VS are as follows:

	2013-14	2012-13	2013-14	2012-13
	VER	VER	VS	VS
Total Cost	£0.512m	£1.808m	£0.672m	£1.999m
Payments in year	£0.055m	£0.039m	£0.672m	£1.999m
Accrual at year end due to employees	Nil	£0.130m	Nil	Nil
Accrual at year end due to pension fund	£0.457m	£1.639m	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	A/C	A/C	A/C	A/C	A/C	A/C	TOTAL
	2956	1752	3119	5117	5155	5140	4511	
	£m	£m	£m	£m	£m	£m	£m	£m
Opening Surplus-pension	(5.354)							
Current Service Costs	(11.200)			3.102	8.098			11.200
Admin. Costs	(0.648)				0.648			0.648
Past	(0.457)					0.457		0.457

Service Costs								
Paid	11.424	(11.424)						
Net Finance Cost	(0.300)						0.300	0.300
Actuarial Loss	10.015		(10.015)					
Closing Liability-pension	3.480							

Key to Account codes

Code		
2956	BS	Pension
1752	BS	Bank
3119	BS	STRGL
5117	P&L Acct	Superannuation – Industrial
5115	P&L Acct	Superannuation – Non Industrial
5140	P&L Acct	Retirement –movement in provision
4511	P&L Acct	Interest Received

The non pension related lump sum entries for 2013/14 are as follows:

Dr 5140 Retirement movement in provision	£0.040m
Cr 2313 Accruals	£0.040m

Dr 2313 Accruals	£0.040m
Cr 1752 Bank	£0.040m

(ignoring any opening accrual from 2012/13).

The accounting entries for the VS schemes for 2013/14 are as follows:

Dr 5140 Retirement movement in provision	£0.672m
Cr 2313 Accruals	£0.672m

Dr 2313 Accruals	£0.672m
Cr 1752 Bank	£0.672m

NIW Pension Fund

The Statutory Accounts at 31 March 2014 (Note 21) 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 2014 £000	Total year to 31 March 2013 £000
At the beginning of the year	155,788	130,195
Movement in year		
Expected return on assets	-	7,126
Interest on pension scheme assets	7,100	-

Contributions by plan participants	861	858
Contributions by employer	11,424	10,909
Actuarial gain/(loss)	(1,260)	7,649
Benefits paid	(2,799)	(2,501)
Settlement payments from plan	527	-
Administrative expenses and insurance	(648)	-
Actuarial gain re: Northgate employees	-	1,402
Curtailment re: Northgate employees	-	150
	170,993	155,788

Movement in present value of defined benefit obligations

	Total year to 31 March 2014 £000	Total year to 31 March 2013 £000
At the beginning of the year	161,142	120,652
<i>Movement in year</i>		
Current service cost	11,200	10,161
Interest on scheme liabilities	7,400	6,277
Past service costs	457	1,639
Actuarial (gain)/loss	(11,275)	22,654
Contributions by plan participants	861	858
Benefits paid	(2,799)	(2,501)
Settlement payments from plan	527	-
Actuarial gain re: Northgate employees	-	1,402
	167,513	161,142

Scheme assets and liabilities

	Total at 31 March 2014 £000	Total at 31 March 2013 £000
Equities	49,362	44,271
Corporate bonds	31,640	28,579
Gilts	45,455	41,566
Other	36,123	33,795
Property	8,413	7,577
Total market value of assets	170,993	155,788
Actuarial value of liabilities	(167,513)	(161,142)
Surplus/ (deficit) in the scheme - pension asset / (liability)	3,480	(5,354)
Related deferred tax (liability)/asset	(696)	1,231
Net pension asset / (liability)	2,784	(4,123)

The year end pension asset as shown above before deferred tax is £3.480m.

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	1.126
Other staff costs	(0.002)
Hired and contracted	0.170
Materials and Equipment	0.002
Other costs of employment	0.018
Other expenses	0.008
Total	1.322

Reprofiling of costs may occur during the year as part of the quarterly reforecasting process.

Capitalisation of costs

During 2013/14 £11.580m of costs were capitalised from the profit and loss account. This can be broken down as follows:

Cost	£m
Staff Costs	9.759
Wages Costs	0.046
Temporary Staff Costs	0.037
Consultants	0.014
Overheads capitalised	1.724
Total	11.580

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	3.781	9.625	13.406
2	Power	£m	3	5.150	3.664	8.814
3	Agencies	£m	3	0.000	0.000	0.000
4	Hired and contracted services	£m	3	2.328	5.340	7.668
5	Associated companies	£m	3	0.000	0.000	0.000
6	Materials and consumables	£m	3	3.598	0.476	4.074
7	Service charges	£m	3	0.636	0.007	0.643
8	Bulk supply imports	£m	3	0.000	0.000	0.000
9	Other direct costs	£m	3	0.004	0.030	0.034
10	Total direct costs	£m	3	15.497	19.142	34.639
11	General and support expenditure	£m	3	7.535	7.928	15.463
12	Functional expenditure	£m	3	23.032	27.070	50.102
B OPERATING EXPENDITURE						
13	Customer services	£m	3			4.472
14	Scientific services	£m	3			1.193
15	Other business activities	£m	3			1.123
16	Total business activities	£m	3			6.788
17	Rates	£m	3			4.894
18	Doubtful debts	£m	3			0.521
19	Exceptional items	£m	3			0.000
20	Total opex less third party services	£m	3			62.305
21	Third party services - opex	£m	3			0.016
21a	PPP Unitary Charges (Opex element)	£m	3			
22	Total operating expenditure	£m	3			62.321
22a	Payment by concessionaire to operator	£m	3			
C REACTIVE AND PLANNED MAINTENANCE (INCLUDING OPEX)						
23	Reactive and planned maintenance infrastructure	£m	3	0.000	9.220	9.220
24	Reactive and planned maintenance non-infrastructure	£m	3	1.746	4.670	6.416
D CAPITAL MAINTENANCE						
25	Infrastructure renewals charge (excluding third party services)	£m	3	23.935	0.000	23.935
26	Current cost depreciation (allocated)	£m	3	17.157	30.581	47.738
27	Amortisation of deferred credits	£m	3			-0.962
28	Amortisation of intangible assets	£m	3			0.000
29	Business activities current cost depreciation (non-allocated)	£m	3			0.167
30	Capital maintenance excluding third party services	£m	3			70.878
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			70.878
34	Total operating costs	£m	3			133.199

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 & TREATMENT	2 WATER DISTRIBUTION	3 WATER SERVICE TOTAL
SERVICE ANALYSIS - WATER						
A	DIRECT COSTS					
1	Employment costs	£m	3			
2	Power	£m	3	5.325	0.000	5.325
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	0.079	0.000	0.079
8	Bulk supply imports	£m	3			
9	Other direct costs	£m	3	0.000	0.000	0.000
10	Total direct costs	£m	3	5.404	0.000	5.404
11	General and support expenditure (NIW Only)	£m	3	0.063	0.000	0.063
12	Functional expenditure	£m	3	5.467	0.000	5.467
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			
17	Rates	£m	3			3.126
18	Doubtful debts	£m	3			
19	Exceptional items	£m	3			
20	Total opex less third party services	£m	3			8.593
21	Third party services - opex	£m	3			
21a	PPP Unitary Charges (Opex element)	£m	3			
22	Total operating expenditure	£m	3			
22a	Payment by concessionaire to operator	£m	3			
C	REACTIVE AND PLANNED MAINTENANCE (INCLUDING 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	4.033	0.000	4.033
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			4.033
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			4.033
34	Total operating costs	£m	3			

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	3.781	9.625	13.406
2	Power	£m	3	10.475	3.664	14.139
3	Agencies	£m	3	0.000	0.000	0.000
4	Hired and contracted services	£m	3	2.328	5.340	7.668
5	Associated companies	£m	3	0.000	0.000	0.000
6	Materials and consumables	£m	3	3.598	0.476	4.074
7	Service charges	£m	3	0.715	0.007	0.722
8	Bulk supply imports	£m	3	0.000	0.000	0.000
9	Other direct costs	£m	3	0.004	0.030	0.034
10	Total direct costs	£m	3	20.901	19.142	40.043
11	General and support expenditure	£m	3	7.598	7.928	15.526
12	Functional expenditure	£m	3	28.499	27.070	55.569
B	OPERATING EXPENDITURE					
13	Customer services	£m	3			4.472
14	Scientific services	£m	3			1.193
15	Other business activities	£m	3			1.123
16	Total business activities	£m	3			6.788
17	Rates	£m	3			8.020
18	Doubtful debts	£m	3			0.521
19	Exceptional items	£m	3			0.000
20	Total opex less third party services	£m	3			70.898
21	Third party services - opex	£m	3			0.016
21a	PPP Unitary Charges (Opex element)	£m	3			
22	Total operating expenditure	£m	3			
22a	Payment by concessionaire to operator	£m	3			
C	REACTIVE AND PLANNED MAINTENANCE (INCLUDING OPEX)					
23	Reactive and planned maintenance infrastructure	£m	3	0.000	9.220	9.220
24	Reactive and planned maintenance non-infrastructure	£m	3	1.746	4.670	6.416
D	CAPITAL MAINTENANCE					
25	Infrastructure renewals charge (excluding third party services)	£m	3	23.935	0.000	23.935
26	Current cost depreciation (allocated)	£m	3	21.190	30.581	51.771
27	Amortisation of deferred credits	£m	3			-0.962
28	Amortisation of intangible assets	£m	3			0.000
29	Business activities current cost depreciation (non-allocated)	£m	3			0.167
30	Capital maintenance excluding third party services	£m	3			74.911
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			74.911
34	Total operating costs	£m	3			

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	2	3	4	
			SEWERAGE	SEWAGE TREATMENT	SLUDGE TREATMENT & DISPOSAL	SEWERAGE SERVICE TOTAL	
SERVICE ANALYSIS - SEWERAGE							
A DIRECT COSTS							
1	Employment costs	£m	3	3.661	4.767	0.576	9.004
2	Power	£m	3	5.625	8.590	1.415	15.630
3	Agencies	£m	3	0.000	0.000	0.000	0.000
4	Hired and contracted services	£m	3	6.657	1.265	2.582	10.504
5	Associated companies	£m	3	0.000	0.000	0.000	0.000
6	Materials and consumables	£m	3	0.097	0.484	0.538	1.119
7	Service charges	£m	3	0.160	0.745	0.183	1.088
8	Other direct costs	£m	3	0.011	0.009	0.001	0.021
9	Total direct costs	£m	3	16.211	15.860	5.295	37.366
10	General and support expenditure	£m	3	7.388	10.058	2.323	19.769
11	Functional expenditure	£m	3	23.599	25.918	7.618	57.135
B OPERATING EXPENDITURE							
12	Customer services	£m	3				4.564
13	Scientific services	£m	3				1.152
14	Other business activities	£m	3				1.146
15	Total business activities	£m	3				6.862
16	Rates	£m	3				3.798
17	Doubtful debts	£m	3				0.233
18	Exceptional items	£m	3				0.000
19	Total opex less third party services	£m	3				68.028
20	Third party services - opex	£m	3				0.009
20a	PPP Unitary Charges (Opex element)	£m	3				
21	Total operating expenditure	£m	3				68.037
21a	Payment by concessionaire to operator	£m	3				
C REACTIVE AND PLANNED MAINTENANCE (INCLUDING OPEX)							
22	Reactive and planned maintenance infrastructure	£m	3	4.857	0.000	0.000	4.857
23	Reactive and planned maintenance non-infrastructure	£m	3	10.070	4.224	0.000	14.294
D CAPITAL MAINTENANCE							
24	Infrastructure renewals charge (excluding third party services)	£m	3	9.474		0.000	9.474
25	Current cost depreciation (allocated)	£m	3	3.184	78.642	1.682	83.508
26	Amortisation of deferred credits	£m	3				-1.526
27	Amortisation of intangible assets	£m	3				0.000
28	Business activities current cost depreciation (non-allocated)	£m	3				0.012
29	Capital maintenance excluding third party services	£m	3				91.468
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				91.468
33	Total operating costs	£m	3				159.505

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	2	3	4	
			SEWERAGE	SEWAGE TREATMENT	SLUDGE TREATMENT & DISPOSAL	SEWERAGE SERVICE TOTAL	
SERVICE ANALYSIS - SEWERAGE							
A DIRECT COSTS							
1	Employment costs	£m	3				
2	Power	£m	3	0.000	2.172	1.804	3.976
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	2.172	1.804	3.976
10	General and support expenditure (NIW Only)	£m	3	0.000	0.173	0.056	0.229
11	Functional expenditure	£m	3	0.000	2.345	1.860	4.205
B OPERATING EXPENDITURE							
12	Customer services	£m	3				
13	Scientific services	£m	3				0.065
14	Other business activities	£m	3				
15	Total business activities	£m	3				
16	Rates	£m	3				0.993
17	Doubtful debts	£m	3				
18	Exceptional items	£m	3				
19	Total opex less third party services	£m	3				5.263
20	Third party services - opex	£m	3				
20a	PPP Unitary Charges (Opex element)	£m	3				
21	Total operating expenditure	£m	3				
21a	Payment by concessionaire to operator	£m	3				
C REACTIVE AND PLANNED MAINTENANCE (INCLUDING 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				

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	2	3	4
				SEWERAGE	SEWAGE TREATMENT	SLUDGE TREATMENT & DISPOSAL	SEWERAGE SERVICE TOTAL
SERVICE ANALYSIS - SEWERAGE							
A DIRECT COSTS							
1	Employment costs	£m	3	3.661	4.767	0.576	9.004
2	Power	£m	3	5.625	10.762	3.219	19.606
3	Agencies	£m	3	0.000	0.000	0.000	0.000
4	Hired and contracted services	£m	3	6.657	1.265	2.582	10.504
5	Associated companies	£m	3	0.000	0.000	0.000	0.000
6	Materials and consumables	£m	3	0.097	0.484	0.538	1.119
7	Service charges	£m	3	0.160	0.745	0.183	1.088
8	Other direct costs	£m	3	0.011	0.009	0.001	0.021
9	Total direct costs	£m	3	16.211	18.032	7.099	41.342
10	General and support expenditure	£m	3	7.388	10.231	2.379	19.998
11	Functional expenditure	£m	3	23.599	28.263	9.478	61.340
B OPERATING EXPENDITURE							
12	Customer services	£m	3				4.564
13	Scientific services	£m	3				1.217
14	Other business activities	£m	3				1.146
15	Total business activities	£m	3				6.927
16	Rates	£m	3				4.791
17	Doubtful debts	£m	3				0.233
18	Exceptional items	£m	3				0.000
19	Total opex less third party services	£m	3				73.291
20	Third party services - opex	£m	3				0.009
20a	PPP Unitary Charges (Opex element)	£m	3				
21	Total operating expenditure	£m	3				
21a	Payment by concessionaire to operator	£m	3				
C REACTIVE AND PLANNED MAINTENANCE (INCLUDING OPEX)							
22	Reactive and planned maintenance infrastructure	£m	3	4.857	0.000	0.000	4.857
23	Reactive and planned maintenance non-infrastructure	£m	3	10.070	4.224	0.000	14.294
D CAPITAL MAINTENANCE							
24	Infrastructure renewals charge (excluding third party services)	£m	3	9.474		0.000	9.474
25	Current cost depreciation (allocated)	£m	3	3.184	78.642	1.682	83.508
26	Amortisation of deferred credits	£m	3				-1.526
27	Amortisation of intangible assets	£m	3				0.000
28	Business activities current cost depreciation (non-allocated)	£m	3				0.012
29	Capital maintenance excluding third party services	£m	3				91.468
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				91.468
33	Total operating costs	£m	3				

Tables 21 & 22 Activity Costing Analysis – Water & Sewerage Service

The costs in Tables 21 & 22 are populated with the updated information available at 7th May 2014 for the year ended 31 March 2014.

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 AIR14. 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 significantly from AIR13 to AIR14 (by over £3M). 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.

Allocation of General and Support	Water		Sewerage			Comments
	R&T	Distribution	Sewerage	Sewage Treatment	Sludge Treatment & Disp	
G&S Overhead Pot 1	25.4%	24.0%	20.2%	21.7%	8.7%	Non ops general spend. Excludes CS, SS & Regulation
G&S Overhead Pot 2a - Water	51.3%	48.7%	0.0%	0.0%	0.0%	Water related activities only
G&S Overhead Pot 2b - Sewerage	0.0%	0.0%	39.9%	43.0%	17.2%	Sewerage activities only
G&S Overhead Pot 3 SA 390	25.4%	24.0%	20.2%	21.7%	8.7%	Water and sewerage networks spend only
G&S Overhead Pot 3 M&E	10.0%	13.0%	24.0%	53.0%	0.0%	M&E Function split based on split supplied by M&E

The percentage splits in AIR14 allocates a greater proportion of General & Support expenditure to Sewerage than AIR13. The allocation to Water from General & Support Overhead Pot 1, which contains over 60% of the costs, remains consistent with AIR13. The main change from AIR13 is in the allocation of G&S Overhead Pot 3 M&E which has reduced its allocation to water from 40% in AIR13 to 23% in AIR14. 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 2013/14 NI Water has not paid any fines under the Streetworks (NI) Order.

Allocation of costs to business activities and rates

All costs which relate to business activities e.g. Customer Services, Scientific Services etc., 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 decreased slightly from 50.0% in AIR13 to 49.5% in AIR14 while allocation to Sewerage has increased slightly from 50.0% in AIR13 to 50.5% in AIR14.

The table below shows the basis of apportionment for AIR14.

Apportionment of business activities	Water		Sewerage		
	R&T	Distribution	Sewerage	Sewage Treatment	Sludge Treatment & Disp
BASIS - Total spend (Includes general & Support)	25.1%	24.4%	20.1%	21.6%	8.7%
Apportionment					
Water / Sewerage split	49.5%		50.5%		

The cost of £1.3M can be broken down as follows:

Description	Amount
Pension related VER past service costs	£0.4M
Non pension lump sum	£0.1M
VS scheme payments	£0.7M
Other	£0.1M
Total	£1.3M

The payments made during the year totalled £0.9M in relation to the 2013/14 scheme. The remaining liability was accounted for in the pension liability and accruals at year end. It is expected that these payments will be made within the next financial year. The corresponding charge for AIR13 was £3.4M.

Other provisions

There are several small provisions relating to claims arising from contractual arrangements with suppliers.

Employment Costs

Staff costs for total NI Water come to circa £48M as detailed below and circa £49M in AIR13. These costs include the £1.3M VER\VS costs outlined above. Only circa £22M is included in Employment Costs (Line 1) in Tables 21 & 22 (AIR13 circa £25M).

The table below provides the reconciliation between these amounts:

Description	Amount	Table 21/22 location
Industrial Wages	£17.3M	
Salaries	£27.2M	
Temporary Staff	£0.8M	
Other Costs of Employment	£1.5M	
Staff Expenses	£1.0M	
Total NI Water staff costs	£47.8M	
Less:		
Customer Services	(£3.6M)	Customer Services
Scientific Services	(£1.2M)	Scientific Services
Regulation	(£0.5M)	Other Business Activities
Unallocated	(£20.1M)	General & Support
Total Employment Costs	£22.4M	£13.4M Table 21 and £9.0M Table 22

The unallocated amount of circa £20.1M 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 decreased by approximately £1.0M from AIR13 due to a reduction in Industrial wages of £1.3M and Other Costs of Employment of £2.1M which was offset by an increase of £2.4M in Salaries.

The reduction in Industrial Wages was due to a reduction in overtime paid and the overall reduction in the number of industrial staff being paid. Other Costs of Employment have reduced as the VER scheme has reduced from previous years. The main increase in Salaries in AIR14 from AIR13 is primarily due to an increase in superannuation costs. The pension charge is provided by Mercer taking their assessment of pension costs based on latest actuarial assumptions and has significantly increased in this financial year.

Hired & contracted

Hired and contracted Services of circa £18M in Table 21 and Table 22 are split out in the table below. The corresponding charge in the AIR13 was circa £18M.

Hired & Contracted Services:	Table 21	Table 22	TOTAL
Operational Contractors	£7.1M	£10.5M	£17.6M
Other Contractors	£0.6M	£0.0M	£0.6M
Consultants	£0.0M	£0.0M	£0.0M
TOTAL	£7.7M	£10.5M	£18.2M

Within the Operational Contractors costs of £7.1M in Table 21, circa £2M 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 consistent with AIR13. Within the Operational Contractors cost of £10.5M in Table 22, circa £2.6M is for the cost of the various Sludge Disposal Routes, circa £6.6M 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.).

There is no spend on Consultants Fees within Hired and Contracted in AIR14.

Hired and contracted Services are consistent with AIR13.

General & support Costs

General & support costs have increased by circa £3.4M from AIR13 (£32.1M) to AIR14 (£35.5M).

The principal costs in this expenditure line are:

Description	Amount	Table 21/22 location
Unallocated Employment Costs	£20.1M	Included in General & Support (Removed from Employment Costs)
Unallocated Power	£0.4M	Included in General & Support (Removed from Power Costs)
Unallocated Hired & Contracted Costs	£4.8M	Included in General & Support (Removed from Hired & Contracted)
Unallocated Materials & Consumables	£1.5M	Included in General & Support (Removed from Materials & Consumables)
Unallocated Other Direct Costs	£5.2M	Included in General & Support (Removed from Other Direct Costs)
Communication	£1.0M	General & Support
Mobile V&P Charges	£2.0M	General & Support
Other	£0.5M	General & Support
Total	£35.5M	£15.5M Table 21 and £20.0M 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 AIR13 and AIR14.

See the **Allocation of costs between service areas** section at the start of the commentary.

The main increases from AIR13 are in Unallocated Employment Costs (£2.1M increase) and Unallocated Other Direct Costs (£2.1M increase) which have been off-set by a reduction in Unallocated Hired and contracted (£1.1M reduction).

The Unallocated Employment Costs increases are driven by an increase in Salaries due to an increase in superannuation costs.



The reduction in Unallocated Hired and Contracted was as a result of reduced costs in Operational Contractors driven primarily by a reduction of circa £0.5M within the M&E Function.

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Table 21 – NI Water Total**A - Direct Costs**

Table 21 Total Functional Expenditure has decreased by circa £1.6M from AIR13 to AIR14. This is primarily due to the reduction in Employment costs of circa £1.4M and some other minor variances which are explained on a line by line basis below:

- Line 1: Employment costs have decreased by circa £1.4M, driven by the reduction in Water Distribution (WD). The decrease in WD is a combination of reduction of wages costs and VER costs from AIR13.
- Line 2: Power costs include electricity costs, fuel costs for power generation and costs for the CRC Energy Efficiency Scheme. Overall the costs have decreased by circa £0.5M in AIR14 from AIR13. Power costs include █████ related to PPP.
- Line 3: Agencies – there are no costs in this line.
- Line 4: Hired and Contracted Services have remained constant with AIR13.
- Line 5: Associated companies – there are no costs in this line.
- Line 6: Materials & Consumables have increased by circa £0.1M from AIR13.
- Line 7: Service Charges – the costs are £0.7M with the majority of the costs in WRT for abstraction licences. These are consistent with AIR13. Service Charges include circa █████ 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 AIR13.
- Line 10: Total Direct Costs – this is a calculated line and is the total of Line 1-9. AIR14 direct costs are £1.8M lower than AIR13. This is driven by the reduction in employment costs and power which have been off-set by the slight increases in the other lines as detailed above.
- Line 11: General & Support expenditure has slightly increased by circa £0.1M from AIR13 to AIR14. 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 AIR13. However General & Support Pot 3 M&E has changed dramatically from AIR13. WRT has reduced from 25% to 10% while WD has reduced from 15% to 13% resulting in a total reduction for Table 21 of 17%. 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 include circa █████ for PPP.
- Line 12: This is the calculated total line for functional expenditure which has decreased by circa £1.6M mainly due to the decreases in Employment costs and Power expenditure as discussed above. Line 12 includes █████ of costs associated with PPP (AIR13 █████).

B - Operating Expenditure

- Line 13: Customer Services costs have increased by circa £0.2M compared to AIR13 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 AIR14 the percentage split was calculated at 49.5% Table 21 and 50.5% Table 22. In AIR13 the percentage split was 50.0% and 50.0% between Table 21 & 22 respectively.
- Line 14: Scientific Services costs have decreased marginally from AIR13. 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 increased from AIR13 by circa £0.2M in Table 21. This is due to an increase in payments to the NIAUR. 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 AIR13 of circa £0.3M is driven by the increases as detailed above.
- Line 17: Local authority rates have increased slightly in AIR14 from [REDACTED]
- Line 18: Doubtful debts have increased from the AIR13 position of £0.3M to £0.5M in AIR14.

The increase in doubtful debts in AIR14 is due to:

1. In AIR14, the net bad debt provision was increased by circa £0.2M primarily to take into account the extra risk attached with the recovery of back-billed debt.
2. During AIR13, £0.3M was received from a debtor for a debt that had previously been provided for in full.

The doubtful debts have split between Table 21 and Table 22 on a specific line by line basis, consistent with what was done in AIR13. This resulted in a £0.2M increase in Table 21 and a £0.2M increase in Table 22.

- 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 decreased by circa £1.0M from AIR13 driven by the decreases in direct costs as detailed above.
- Line 21: Third party services are immaterial.
- Line 21a: Total PPP Unitary Charge has increased by circa [REDACTED] due to a change in the underlying PPP finance lease model. 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 around [REDACTED] from AIR13 mainly due to the significant increases in the PPP Unitary charge. This agrees to Table 35 line 24. Total operating expenditure includes circa [REDACTED] relating to PPP (AIR13 [REDACTED]).
- Line 22a: This figure has increased by [REDACTED] from AIR13 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 decreased by circa £0.1M from AIR13.
- Line 24: Non-infrastructure, this figure has increased by circa £0.1M from AIR13.

PPP – Alpha

A contract with Dalriada Water Ltd. was signed on 30 May 2006 for the provision of bulk drinking Water supplies. This has a capital cost in the region of £111M. The service provision has commenced roll-out from 2008. The contract is for 25 years with an end date of 29 May 2031.

Charge to the profit and loss

This transaction is treated as an on balance sheet PFI transaction and the underlying PPP finance lease model has changed during the year resulting in changes to the following components:

- In 2013/14 the net charge to the profit and loss account in respect of the service element of the Alpha unitary payments was █████ (2012/13 █████).
- In 2013/14 the charge to the profit and loss account in respect of the finance charge element of the Alpha unitary payments was █████ (2012/13 █████).
- In 2013/14 an amount of █████ (2012/13 █████) of the unitary charge was debited to the balance sheet as it related to the repayment of the notional finance lease underpinning this on-balance sheet transaction.
- In 2013/14 an amount of █████ (2012/13 █████) of the unitary charge was debited to the balance sheet as it related to the additions to the capital maintenance asset for Alpha.
- In the period there was also a depreciation charge of █████ (2012/13 █████).

Leakage costs

Operating costs relating to leakage have decreased marginally from £5.4M in AIR13 to £5.1M in AIR14. Capital expenditure has remained consistent from AIR13 to AIR14.

Table 22 – NI Water Total**A - Direct Costs**

Total Functional Expenditure in Table 22 has increased by circa £2.4M from AIR13 to AIR14. This is primarily driven by an increase in General & Support expenditure of circa £3.3M offset by a reduction in Employment costs of circa £1.2M. This is explained on a line by line basis below:

- Line 1: Employment costs have decreased in Sewerage by circa £0.3M, in Sewage Treatment by circa £0.4M and by £0.5M in Sludge Treatment & Disposal from AIR13. The overall decrease is due to a combination of a decrease in VER costs with only 5 staff leaving through VER in comparison with 22 in AIR14 and a reduction in wages costs due to less staff.
- 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 slightly increased by £0.2M in AIR14 from AIR13. In AIR14 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 AIR13. 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 45:55 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 AIR13 the estimated split was 42:58. Power costs include [REDACTED] for PPP (AIR13 [REDACTED]).
- Line 3: Agencies – there are no costs in this line.
- Line 4: Hired and Contracted have increased slightly by £0.2M.
- Line 5: Associated companies – there are no costs in this line.
- Line 6: Materials & Consumables have decreased marginally by £0.2M from AIR13 to AIR14.
- Line 7: Service Charges – the costs are £1.1M and are consistent with AIR13. 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. AIR14 direct costs are £0.9M lower than AIR13. This is driven by the reduction in Employment Costs as detailed above.
- Line 10: General & Support expenditure has increased by circa £3.3M from AIR13 to AIR14. There has been minimal change in the costs allocated to Sewerage, however Sewage Treatment has increased by £3.1M and Sludge Treatment & Disposal by £0.3M. Overall General and Support costs have increased in AIR14 by circa £3.4M (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 AIR13. However General & Support Pot 3 M&E has changed dramatically from AIR13. Sewerage has decreased from 35% to 24% while Sewage Treatment has significantly increased from 25% to 53% resulting in a total increase for Table 22 of 17%. 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 [REDACTED] for PPP. This is consistent with AIR13.
- Line 11: This is the calculated total line for Functional Expenditure which has increased by £2.4M. This increase is driven by the £3.3M increase in General &

Support costs as discussed above. Line 11 includes costs of [REDACTED] associated with PPP (AIR13 [REDACTED]).

B - Operating Expenditure

- Line 12: Customer Services costs have increased by circa £0.3M compared to AIR13 in Table 22. Customer Services costs are apportioned based on the percentage of direct costs from Table 21 & 22. In AIR14 the percentage split was calculated at 49.5% Table 21 and 50.5% Table 22. In AIR13 the percentage split was 50:50 between Table 21 & 22 respectively.
- Line 13: Scientific Services costs have decreased marginally from AIR13. 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 increased from AIR13 by circa £0.2M in Table 22. This is due to an increase in payments to the NIAUR. 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 increased by circa £0.4M from AIR13.
- Line 16: Local authority rates have decreased [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- Line 17: Doubtful debts have increased from AIR13 by circa £0.2M.

The increase in doubtful debts in AIR14 is due to:

1. In AIR14, the net bad debt provision was increased by circa £0.2M primarily to take into account the extra risk attached with the recovery of back-billed debt.
2. During AIR13, £0.3M was received from a debtor for a debt that had previously been provided for in full.

The doubtful debts have split between Table 21 and Table 22 on a specific line by line basis, consistent with what was done in AIR13. This resulted in a £0.2M increase in Table 21 and a £0.2M increase in Table 22.

- 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 increased by £1.2M from AIR13. This is primarily driven [REDACTED]
- Line 20: Third party services are immaterial.
- Line 20a: Total PPP Unitary Charge has decreased by circa [REDACTED] from AIR13. 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 £0.4M from AIR13. Total operating expenditure includes [REDACTED] of costs associated with PPP (AIR13 [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 ██████ to ██████ in AIR14.

C - Reactive & Planned Maintenance

- Line 22: Infrastructure, this figure has reduced marginally from AIR13 to £4.9M.
- Line 23: Non-infrastructure, this figure has decreased by circa £0.7M from AIR13 to £14.3M.

PPP

Kinnegar

A contract with Coastal ClearWater Ltd was signed on 30 April 1999 for the provision of Sewerage treatment which covered the upgrading of the Kinnegar Waste Treatment Works with a capital cost in the region of £11M. The contract is for 25 years with an end date of 30 April 2024. The PFI property involved is not an asset of NI Water but the assets will revert to NI Water at the end of the contract. In 2013/14 the charge to the Operating Costs Statement in respect of Kinnegar was ██████ (2012/13 ██████). The gross charge was ██████ (2012/13 ██████) with ██████ (2012/13 ██████) capitalised in relation to the residual interest asset

Omega

A contract with Glen Water Ltd was signed on 6 March 2007 for the provision of Sewerage treatment and sludge disposal at six sites with a capital cost in the region of £122M. The contract is for 25 years with an end date of 5 March 2032.

The PFI property involved is not an asset of NI Water but since the assets will revert to NI Water at the end of the contract, part of the unitary charge has been capitalised as a residual interest asset. In 2013/14 the charge to the Operating Costs Statement in respect of Omega Unitary Charge was ██████ (2012/13 ██████). The gross charge was ██████ (2012/13 ██████) with ██████ (2012/13 ██████) capitalised in relation to the residual interest asset.

Reactive and planned maintenance

The overall approach and allocation process for Tables 21 and 22 has remained consistent with AIR13. However there still 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 2014 were £12.6M (AIR13 £10.8M) which amounts to £12.3M before interest **costs** of £0.3M (AIR13 £11.7M before interest **credit** of £0.9M) and these were charged to the profit and loss account. This is made up of current service costs of £11.8M (AIR13 £10.2M) and past service costs of £0.5M (AIR13 £1.6M) [note: AIR 13 costs included a one-off credit of £0.1M]. 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 £11.4M (AIR13 £10.9M) including £1.3M relating to payment of 2012/13 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 2014 has moved from a liability to an asset position.

Further disclosures on pensions are contained in the statutory accounts which are based on the company's actuarial report at 31 March 2014.

Third party costs

Third party costs remain negligible in AIR14 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 – Water Service (PPP only)**Line 2 - Power costs**

Power costs have fallen by [REDACTED] from the AIR13 reported figure of [REDACTED]. This results from reduced power consumption in the 2013/14 year.

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 AIR13.

Line 11 - General & support expenditure

General and support expenditure has been calculated on the same basis as in AIR13. Costs have remained the same as 2012/13 at [REDACTED].

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 fallen slightly from AIR13. This arises as the allocation of the rates charge is done on the basis of total water supply and the proportion of total water supplied by PPP in 2013/14 has fallen slightly.

Line 21a - PPP unitary charges (Opex)

This line data is drawn directly from the Company's accounts. No additional reconciliation is required.

During 2013/14 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:

Quality Monitoring Change [REDACTED]	[REDACTED]
EIB Step-down	[REDACTED]
[REDACTED] in respect of reorganisation costs	[REDACTED]
Total	[REDACTED]

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 in AIR14 is made up as follows:

Inflationary increase in capacity charge	[REDACTED]
Increase in volumetric charge (inflation and flow related)	[REDACTED]
Increase in performance deductions	[REDACTED]
Increase in atypical credits	[REDACTED]
Decrease in amounts capitalised	[REDACTED]
Decrease in interest element of charge	[REDACTED]

The large decrease in the amounts capitalised and the interest charge arise from a revision to the finance lease model in 2013/14 following a management letter point raised by KPMG during the audit of the 2012/13 year end accounts. The original method of accounting for this would have resulted in the finance lease being paid off before the end

of the PPP contract and hence higher P&L charges in the latter years of the contract. This new approach matches the lease repayment to the contract length and hence lowers the transfer to the balance sheet in the earlier years. This exercise also involved correctly allocating a proportion ██████ of the capacity charge to opex reflecting the fact that the capacity charge contains an element of fixed operating costs. ██████ of the capacity charge of ██████ equates to ██████ thus accounting for the large increase in the charge on this line in AIR14.

Line 22(a) - Payments from concessionaire to operators

This figure varies from year to year depending upon volumes of water dispatched, changes in the volumetric charge, deductions incurred and indexation

Table 22 – Sewerage Service (PPP only)

Table 22 PPP only

Line 2 - Power costs

Power costs have reduced from AIR13 as a result of reduced power consumption in 2013/14.

Costs for Duncrue and a 35% allocation of the Ballynacor site costs have been included in column 3 as sludge treatment and disposal costs. This is consistent with AIR13.

Kinnegar: Power costs are not recorded as [REDACTED]
[REDACTED]

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 AIR13 reflecting all costs associated with P101 cost centre. These costs are slightly higher in AIR14 as the percentage of time spent by some staff on the Omega contract in 2013/14 has increased.

Total general and support costs associated with the Omega contract were calculated at [REDACTED] 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 remained relatively static from AIR13.

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 AIR14 is 4.3%.

Line 20a - PPP unitary charges (Opex)

The charge for Kinnegar included in this line of [REDACTED] reflects the invoiced/accrued amounts for the year of [REDACTED] 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 [REDACTED] the credit for residual interest of [REDACTED] and atypical costs of [REDACTED] as follows:

Provision for Omega Contractor Legal Costs	[REDACTED]
North Down and Ards Disinfection Change	[REDACTED]
Supplemental 4 Agreement	[REDACTED]
Change in Calibration Frequency	[REDACTED]

Total

██████████

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 decreased by ██████████ from AIR13. This movement can be summarised as follows:

Increase in volumetric charge (inflationary and flow related)	██████████
Decrease in performance deductions	██████████
Decrease in atypical costs	██████████
Increase in amounts capitalised	██████████

The atypical costs in AIR13 included ██████████ for an increase in the contractor claim provision. ██████████ has been provided in AIR14 for Contractor legal costs associated with these claims hence the drop in atypical costs.

Line 21(a) - Payments from concessionaire to operators

Column 2: Payments to Operators for Sewage Treatment has changed to reflect:

- 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.
- Any non-performance issues encountered by either Operator under their own contract arrangements with the Contractor/Concessionaire.

Column 3: This year's figure represents a full year's payment to the operator for sludge disposal services only.

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

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.

At the close of 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 which 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. 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).

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; 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 report 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 Finance and Regulation (F&R) and Customer Services (CS) is held on the afternoon of Day 4 to ascertain high level reasons for any budget/forecast variances in the month.

On Day 5, Echo delivers the Day 5 data to CS. This contains a number of detailed spreadsheets, containing, amongst other things, transaction information, VAT information and accrual information (see Appendix B). The transaction information is reviewed by both F&R and CS to analyse the system adjustments made in the month and to understand better any budget/forecast variances in the month.

On Day 8, the final income meeting is held between F&R and CS, at which the variance analysis is discussed in greater depth. A final income report is then prepared and sent out to all relevant staff, including the Finance Director and the CSDD Director.

A commentary on the income for the month is prepared for the Board to be included in the monthly Finance Report.

NI Water also analyses billed income each month by volume and consumption, in what is termed the "Actuals Report". A monthly meeting is held to review this.

Movements in income against budget

Following on from the monitoring process detailed above, the 2013/14 year-end position of income against budget was as follows:

Income	Actual Income 2013/14 £m	Budget Income 2013/14 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	122.1	122.1	0.0
Domestic phasing subsidy - sewerage	138.2	138.2	0.0
Non-domestic phasing subsidy - water	1.1	1.1	0.0
Non-domestic phasing subsidy - sewerage	1.3	1.3	0.0
Domestic allowance - water	8.2	7.9	0.3
Domestic allowance - sewerage	4.3	4.1	0.2
Septic tank subsidy	2.2	2.2	0.0
Total subsidy	277.4	276.9	0.5
Non-domestic income:			
Measured water	35.5	34.1	1.4
Measured sewerage	21.4	21.2	0.2
Unmeasured water	1.0	1.0	0.0
Unmeasured sewerage	1.2	1.2	0.0
Trade effluent	6.4	6.3	0.1
Total non domestic income	65.5	63.8	1.7
Road drainage income	20.0	20.0	0.0
Other	3.6	3.5	0.1
TOTAL INCOME	366.5	364.2	2.3

The above table includes both appointed and un-appointed income.

As can be seen, total income was £2.3m over budget for 2013/14, because of the following:

- With domestic allowance subsidy, more customers applying for the domestic allowance e.g. £0.1m of back-claims from the Education and Library Boards.
- Both measured water and measured sewerage experienced rises in income, following on from the investigatory work being carried out on NI Water's stock of meters. A small number of customers were back-billed, due to a variety of reasons e.g.:
 - The meters not having been entered on to the Rapid system when they were installed initially;
 - Meters which were faulty e.g. showing a zero reading, when in fact there been consumption; and

- Meters where it had not been possible, for access reasons, to take a read, and the consumption estimates in previous bills had been less than what had actually been used.
- Furthermore, there have been instances of a small number of customers with increases in their consumption, due to a variety of reasons e.g. leakage, increases arising from the snow in March 2013, G8 summit in June 2013; the budget for 2013/14 had assumed an overall 1% reduction in consumption
- These increases were offset by provisions made for both measured water and measured sewerage in the year, being:
 - £1.0m in measured water, increasing the provision set aside for future system adjustments; and
 - £1.0m in measured sewerage providing against the possibility of customers having been billed incorrectly for both measured sewerage and trade effluent.

Movements in income between 2012/13 and 2011/12

The table below details the income for the year ended 31 March, for both 2014 and 2013:

Income	Actual Income 2013/14 £m	Actual Income 2012/13 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	122.1	121.2	0.9
Domestic phasing subsidy - sewerage	138.2	143.9	(5.7)
Non-domestic phasing subsidy - water	1.1	1.2	(0.1)
Non-domestic phasing subsidy - sewerage	1.3	1.4	(0.1)
Domestic allowance - water	8.2	7.9	0.3
Domestic allowance - sewerage	4.3	4.0	0.3
Septic tank subsidy	2.2	2.1	0.1
Total subsidy	277.4	281.7	(4.3)
Non-domestic income:			
Measured water	35.5	36.2	(0.7)
Measured sewerage	21.4	19.6	1.8
Unmeasured water	1.0	1.0	0.0
Unmeasured sewerage	1.2	1.3	(0.1)
Trade effluent	6.4	7.1	(0.7)
Total non domestic income	65.5	65.2	0.3
Road drainage income	20.0	20.9	(0.9)
Other	3.6	3.8	(0.2)
TOTAL INCOME	366.5	371.6	(5.1)

The above table includes both appointed and un-appointed income.

The income has decreased by £5.1m, due to:

- A decrease in the subsidy of £4.3m, which reflects the PC13 Final Determination, where the overall revenue requirement was reduced significantly.
- For measured water, there was a tariff decrease for measured water (2.6%), however, as mentioned above in the analysis against budget, measured water had a number of back-billing incidents during the year. This helped to increase underlying measured water income by £1.4m against the total for 2012/13. However, there was a £2.0m reduction in 2013/14 income caused by a £1.0m increase in the future system adjustments at March 2014 plus 2012/13 having a £1.0m release of various provisions.
- For measured sewerage, tariffs in 2013/14 remained virtually unchanged from 2012/13. The main reason for the increase in income against last year was the £2.7m set aside at March 2013 for Hospital TE; this was compensated for, at March 2014, by an increased provision for TE review issues amounting to £1.0m.
- Trade effluent income in 2012/13 included a positive accrual of £1.3m for the hospital TE billing; in 2013/14, this was a reduction of £0.2m. Underlying trade effluent income therefore actually increased by £0.8m against the previous year, where there were increases in consumption/strengths for various customers e.g. Tayto, Moy Park, Linden Foods.

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 2014:

Measured and unmeasured income			
			£m
Invoiced income			69.3
System adjustments			(6.5)
Billed income			<u>62.8</u>
Movement in accrued income			0.4
2014/15 unmeasured billing deferred			(2.3)
Movement in Hospital TE provision			(0.2)
Movement in future system adjustments provision			(1.2)
Altnagelvin adjustment			0.3
Provision for TE review			(1.0)
Release of ELB domestic allowances			0.3
Total income per accounts			<u><u>59.1</u></u>
Accrued income at 31 March 2014 represented 21% (2013: 19%) of annual billed income.			

Trade effluent			
			£m
Invoiced income			6.6
System adjustments			(0.1)
Movement in accrued income			0.1
Movement in Hospital TE provision			(0.2)
Total income per accounts			<u><u>6.4</u></u>
Accrued income at 31 March 2014 represented 10% (2013: 10%) 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 2013/14, and are not expected to recur:

- Release of ELB domestic allowances – provision was released during the year.

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.
- 2014/15 unmeasured billing deferred – the annual unmeasured billing will always be deferred, assuming that the invoicing is carried out in March.
- Movement in Hospital TE provision – there will be movements in this provision during 2014/15, once the refunds have been agreed with all the hospital Trusts
- Movement in Future system adjustments provision – there will always be the need to provide for estimated future system adjustments.
- Altnagelvin adjustment – this will be reversed out in 2014/15
- Provision for TE review – there will be a movement in this when it is released in 2014/15.

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.

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

During 2013/14, Internal Audit undertook a follow-up to their review in 2010 on Income Forecasting, Monitoring and Reporting. Their report in 2013/14 identified one Observation and one Category 3 issue, relating to the updating of procedure documents; this issue is due to be completed by 30 June 2014. In addition, Internal Audit carried out a review of the work done to satisfy the Management Letter Points raised by KPMG in its 2012/13 audit. These points were cleared by the required dates.

Balance Sheet Nominal Ledger Accounts

The table below gives details of the relevant balance sheet accounts as at 31 March 2014, together with a comparison to the balances as at 31 March 2013.

	Balance 2013/14 £m	Balance 2012/13 £m	Variance £m
Debtors (water and sewerage)	11.1	9.5	1.6
Debtors (trade effluent)	1.1	0.7	0.4
Bad debt provision	(4.3)	(4.5)	0.2
Bad debt provision (trade effluent)	(0.1)	(0.1)	0.0

The £2.0m total movement in the trade debtor balance for water and sewerage and trade effluent can be explained by various differences:

- The debtors at 31 March 2014 included £2.3m of 2014/15 unmeasured annual billing, which was raised in March 2014; the unmeasured billing for 2013/14 was not carried out until April 2013 (due to bad weather in March 2013).
- The rise in trade effluent debtors at 31 March 2014 can be put down to an outstanding amount of £0.2m relating to Altnagelvin, which was not there at March 2013, as well as the increased consumption at Moy Park sites in the final months of 2013/14 leading to a £0.1m increase in its debt.

The £0.2m decrease in the bad debt provision reflects:

- The reduced level of aged debt at 31 March 2014; in particular, debt greater than six months dropped from £5.1m at March 2013 to £4.7m at March 2014.

Accrued Income

In essence, there has been no change in how income has been accrued from the previous year. There are two reports which Echo uses for accrued income, both in the form of Excel spreadsheets included within the Day 5 data: 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 DCR 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 which 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 which 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 DCR is reviewed by Customer Services for any unusual items, and an adjustment made for those. The adjustment made in March 2014 is shown in Appendix H.

The accrued income in the last two years has been:

	Accrued Income 2013/14 £m	Accrued Income 2012/13 £m	Variance £m
Accrued income:			
Measured water and sewerage	7.2	8.9	(1.7)
Trade effluent	1.9	1.9	0.0
TOTAL ACCRUED INCOME	9.1	10.8	(1.7)

This fall of £1.7m against the previous year can be explained as follows:

- Basic accrued income for measured water, measured sewerage and trade effluent increased by £0.6m. However, there were a few decreases as indicated below.
- The provision for future system adjustments was increased by £1.0m.
- There was £1.0m set aside for adjustments arising from the TE review.
- The provision for TE/MS relating to hospitals was increased by £0.3m.

Subsidy income

In 2013/14, NI Water had total subsidy income of £277.4m. This was broken down as follows:

- £260.3m for domestic phasing subsidy for water and sewerage, in lieu of domestic charges.
- £2.4m for non-domestic phasing subsidy, representing 50% of unmeasured non-domestic income.
- £12.5m for domestic allowance subsidy, representing the domestic allowance claimed by customers for both water and sewerage.
- £2.2m 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 financial year.

Road drainage income

The road drainage charge for 2013/14 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 DRD. A total of £20.0m was invoiced in 2013/14 to Roads Service, compared to £20.9m in 2012/13. 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	0.4238	0.1992	
Cost of Run off	13,699,419	6,349,461	20,048,880

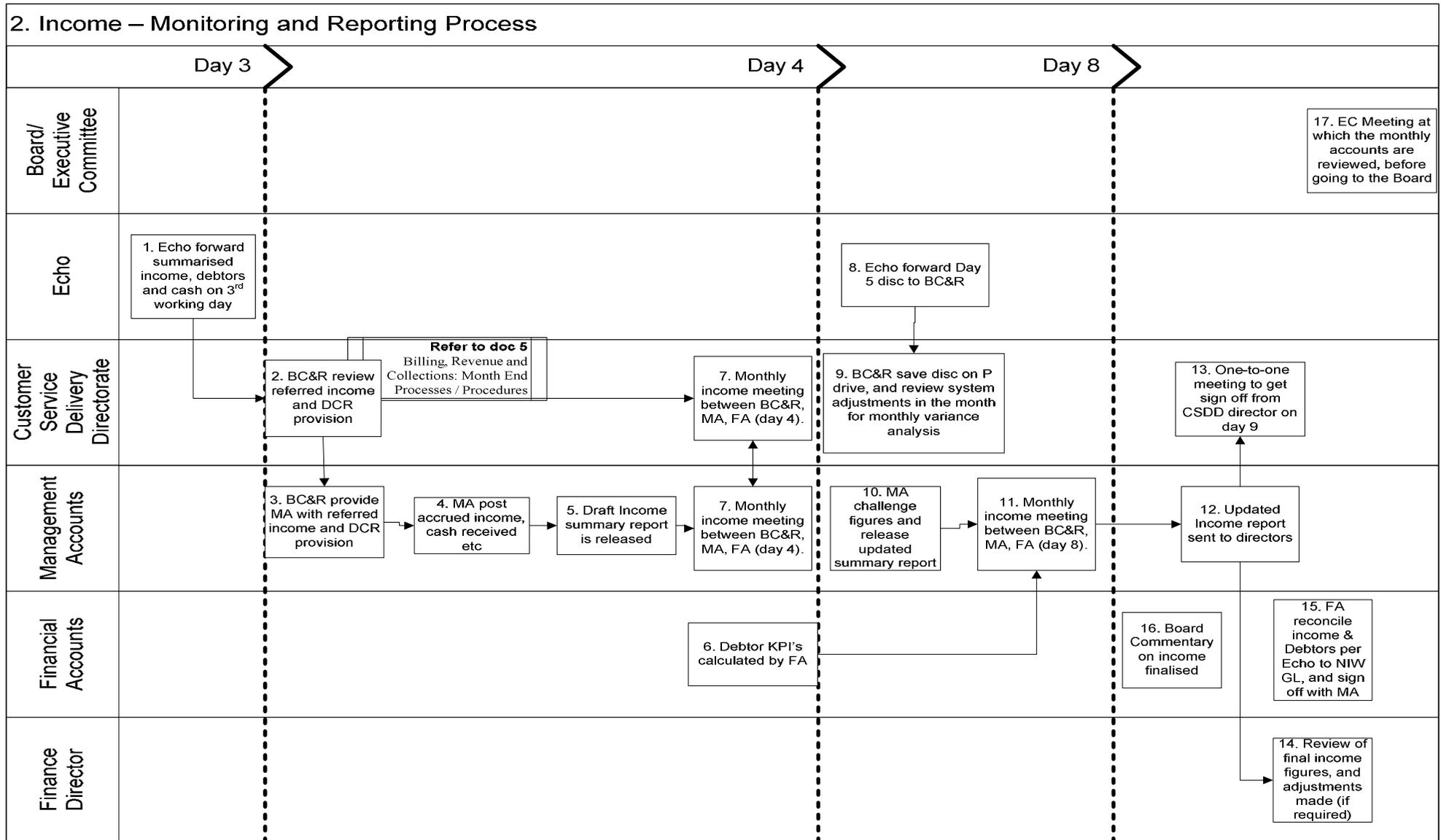
Non-tariff basket income

There is no net income movement out of the tariff basket for either water or sewerage.

Other income

Other income was £3.6m for the 2013/14 year, against a budget of £3.5m, largely as a result of increased income from aerial sites and from vehicle maintenance (as reflected in increased vehicle maintenance costs).

Appendix A - Monthly Process for Monitoring Income



Appendix B – Day 5 Data received from Echo

<u>File Name</u>	<u>Output</u>	<u>Reconciliations & Checks</u>
CA_BSD_02 MMM xx Financial Summary Information_v1.0.xls	Day 3 Summary of Day 5 Files	ensure all 23 tabs relate to files for day 5 CD
CA_BSD_MMM xx Bank rec_V1.0.xls	Bank Reconciliation	Ensure reconciliation to FN012 Cash, FN012 credit card, FN012 refunds and Suspense
CA_BSD_0211 Refunds_MMM xx_v1.0.xls	Details of refunds	
CA_BSD_AccrualdetailMMMM xx_v1.0.xls	Details of accruals by customer	Analysis performed to examine changes in meters, consumption and summary given in Day 3 of income analysis
CA_BSD_AccrualexceptionsDCMMM xx_v1.0.xls	Details of meters not accrued	Ensure No of meters corresponds to Accrual Summary file
CA_BSD_AccrualsummaryDCMMM xx_v1.0.xls	Summary by Pipesize of accruals	Ensure that totals correspond to detailed file
CA_BSD_Aged Cash MMM xx_v1.0.XLS	Cash received aging	Reconciliation to FN012
CA_BSD_Aged Returned Payments MMM xx_v1.0.XLS	Returned Payments aging	Reconciliation to FN012
CA_BSD_VAT EC Sales List		
CA_BSD_FN012 Summary Split Extended MMM xx_v1.1.xls	Summary of FN012 by category with monthly summary and journals	Reconciliation to FN012, reconciliation of journal files to FN012
CA_BSD_FN012 Summary Split OLD - MMM xx_v1.0.xls	Summary of FN012 with VAT summary	Reconciliation to FN012
CA_BSD_FN012 Summary Total MMM xx_v1.0.xls	Summary by month of billing and cash received	Reconciliation to FN012
CA_BSD_FN015 Aged Debt By Industry MMM xx_v1.0.xls	Aged debt	Reconciliation to FN012 and FN016,FN017,FN018
CA_BSD_FN016 Aged Debt By Payment Plan MMM xx_v1.0.xls	Aged debt	Reconciliation to FN012 and FN015,FN017,FN018
CA_BSD_FN017 Aged Debt By Recovery Stage MMM xx_v1.0.xls	Aged debt	Reconciliation to FN012 and FN015,FN016,FN018
CA_BSD_FN018 Aged Debt By Recovery Profile MMM xx_v1.0.xls	Aged debt	Reconciliation to FN012 and FN015,FN016,FN017
CA_BSD_Manual Adjustments MMM xx_v1.0.xls	details of manual adjustment transactions	reconciles to FN012
CA_BSD_N-Stop Aging - MMM xx_v1.0.xls	Summary of N-Stops by age	Reconciles to GL99 - Ordinary Customers
CA_BSD_Referred Bills Summary MMM xx_v1.0.xls	N-Stops and Bill Ceilings	Reconciles to GL99 and CTLPRT04
CA_BSD_Summary Suspense Report MMM xx incl aged_v1.0.xls	Summary of FN013 (aged)	Reconciles to FN013 / Bank Rec
CA_BSD_TE FN012 Aged Debt Rec MMM xx_v1.0.xls	Reconciliation of TE FN012 to aged debt	n/a - this is a reconciliation
CA_BSD_TE_AI_MMM xx_V1.xls	Details of accruals by customer (TE)	Spot check on calculation sheets. Income test for TE accruals and invoices
CA_BSD_Transaction Report MMM xx_v1.0.xls	Full transactional detail of FN012 amounts	Reconciled to FN012
CA_BSD_VAT EC Sales List		
CA_BSD_VAT Invoice Summary	All VAT bill transactions for period	Reconciles to FN012 and summary split (old)
SIC movement		
2 VAT reports		

Appendix C – Reconciliation of Echo Day 3 Information at 31 March 2014

Extract for Finance Summary

YTD Income 1st Apr to end of Previous Month	31 Mar 14		Referred Income	Referred Income	Deferred Income	Deferred Income	Monthly Movement	Closing Balance	GL01 report	Diff	DIFFERENCES		DIFFERENCES		DIFFERENCES		DIFFERENCES		DIFFERENCES		DIFFERENCES		DIFFERENCES		Future ops adjs reduction	Diff										
	from Echo	Accrued Income									Accrued Income	Reverse Income	Reverse Income	Reverse Income	Reverse Income	Reverse Income	Reverse Income	Reverse Income	Reverse Income	Reverse Income	Reverse Income	Reverse Income	Reverse Income	Reverse Income			Reverse Income									
4211 Measured Water	33,328,934	7,824,241	7,824,241	205,692	(118,511)	3,404,203	36,733,137	35,034,423	(1,698,714)	(85,000)	7,000	(112,981)	124,947	3,324,230	(5,345,230)	183,000	300,000	58,187	(105,867)	(400,000)	63,000	(63,000)	55,000	(55,000)	140,000	(240,000)	50,000	(50,000)	15,000	50,000	(105,000)	(1,000,000)	0			
4211 Measured Sewerage	19,738,487	5,783,039	5,783,039	225,850	(72,845)	1,811,267	21,539,801	21,401,818	(138,336)	(97,500)	19,500	(78,869)	87,917	3,324,230	(5,345,230)	183,000	300,000	58,187	(105,867)	(400,000)	63,000	(63,000)	55,000	(55,000)	140,000	(240,000)	50,000	(50,000)	15,000	50,000	(105,000)	(1,000,000)	0			
4251 Unmeasured Water	679,317	169,240	169,240	0	0	89,608	89,608	89,608	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4351 Unmeasured Sewerage	1,112,264	282,206	282,206	0	0	132,261	1,252,527	1,252,527	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4411 Trade Effluent	5,811,960	492,446	492,446	0	0	252,245	6,304,406	6,414,651	(109,426)	(189,426)	11,156	(1,334,610)	1,247,110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
60,890,737	8,330,999	15,739,146	15,883,120	441,541	(188,151)	154,711	2,251,408	6,180,148	67,030,904	65,544,428	(1,506,476)	(182,600)	17,500	3,338,112	(913,709)	2,089,620	(2,102,120)	0	300,000	108,456	(233,833)	(400,000)	63,000	(63,000)	80,000	(80,000)	0	140,000	(240,000)	50,000	(50,000)	10,000	50,000	(105,000)	(1,000,000)	0

Appendix D – Reconciliation of Debtors account on Oracle

NORTHERN IRELAND WATER LIMITED AS AT 31 MARCH 2014	
Summary of Debtors	
Water & Sewerage Debtors GL code 1210	Mar 2014
Opening Balance	£10,435,066.94
Take on Bills/New Bills- TOTAL	£7,024,693.15
Take on Bills/New Bills- Sewerage	1,878,078.52
Take on Bills/New Bills- Water	2,719,167.78
Take on Bills/New Bills- VAT	120,738.28
Annual Billing	2,251,405.74
Annual Billing - VAT	55,302.83
Discounts	(20.97)
System Adjustments- Total	£866,504.78
System Adjustments- Sewerage	(84,777.48)
System Adjustments- Water	857,594.49
System Adjustments- VAT	93,687.77
Manual Adjustments- Total	-£36,145.84
Manual Adjustments- Sewerage	(22,690.32)
Manual Adjustments- Water	(12,878.62)
Manual Adjustments- VAT	(576.90)
Write Off Adjustments Total	£52,155.31
Write Off Adjustments- Sewerage	19,878.09
Write Off Adjustments- Water	31,421.23
Write Off Adjustments- VAT	855.99
NIWS Bad Debt Authorised Write Off- Total	-£181,305.19
NIWS Authorised Write Off- Sewerage	(56,319.76)
NIWS Authorised Write Off- Water	(118,596.06)
NIWS Authorised Write Off- VAT	(6,389.37)
Net Cash	(5,397,727.30)
Refunds	176,457.19
Water & Sewerage GL code 1210 Closing Balance	£12,939,678.07
Check	
Metered & Unmetered Water & Sewerage Debtors	£12,939,678.07
(AS per Crystal)	
Per Tb GL code 1210	11,060,228.88
Variance	£1,879,449.19
Due to:	
Variance (Oct = w/off Income 0708 in Oct08)	
Referred Bills NOT Recognised NET	(189,151.00)
System Adjustment Reduction	(1,550,000.00)
Various MS Adjustments	(140,000.00)
Unknown	-£298.19
Trade Effluent Debtors GL code 1213	
Opening Balance	£1,087,437.22
Take on Bills/New Bills	748,379.30
Referred Bills	
Annual Billing	
System Adjustments	-£55,483.77
Manual Adjustments	£0.00
Write Off Adjustments	
NIWS Authorised Bad Debt Write Off	£0.00
Net Cash	-£628,121.02
Refunds	£0.00
Trade Effluent GL code 1213 Closing Balance	£1,152,211.73
Variance	£0.00
Per Trial Balance general ledger code 1213	1,152,212
Referred Bills	
Total Opening Balance GL code 1213 & 1210	£11,522,504.16
Take on Bills/New Bills	£5,521,666.71
Annual Billing	£2,251,405.74
Discounts	-£20.97
System Adjustments	£811,021.01
Manual Adjustments	-£36,145.84
Write Off Adjustments	£52,155.31
NIWS Authorised Bad Debt Write Off	-£181,305.19
Net Cash	-£6,025,848.32
Refunds	£176,457.19
Total Closing Balance GL code 1213 & 1210	£14,091,889.80
Balance as per FN012 Summary	£14,091,420.22
Difference	£469.58
Prepared By	Deborah Cooke
Date	
Reviewed By	Peter McNamee
Date	

Appendix E – Reconciliation of Accrued Income Account

<u>NIW Accrued Income</u>	
	Mar-14
Per Echo	
Measured Water	7,553
Measured Sewerage	5,654
Trade Effluent	686
Accrued income	13,893
<u>Accrued income adjustments</u>	
Voids not billed in unmeasured	82
DCR Provision	-314
DCR Further	-500
██████████	18
Accrued Income provision	-234
Hospital TE	-2,102
██████████ TE release	286
Industry average adj	-63
Income prov adj	-80
Additional TE provision	-100
██████████ Adjustment	300
Customer Overcharge	-105
Future System Adjustments	-1,000
TE Review	-900
Accrued income posted	9,180
Per TB	9,180
Difference	0
Miscellaneous accrued Income	414
Interest Received Accrual	5
Total Accrued Income	9,598
Signed:	
TB Check	
1420 - Metered Water Accrued Income	7,240,609
1423 - Trade Effluent Accrued Income	1,938,993
1426 - Miscellaneous Accrued Income	414,084
1451 - Interest Received Accrual	4,504
	9,598,189.49

Appendix F – Reconciliation of Meters

2013/14 - Meter Reconciliation Analysis												
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Meters to be read												
Estimated	862	1,844	726	787	1,167	712	1,229	2,043	1,179	933	1,592	2,716
No Read	480	463	293	289	317	402	490	480	279	299	338	401
Read	12,600	12,872	9,511	9,530	10,861	13,398	12,202	12,545	8,953	9,307	10,330	11,300
Total Meters	13,942	15,179	10,530	10,606	12,345	14,512	13,921	15,068	10,411	10,539	12,260	14,417
No Reads to be investigated - Code Red	11	40	24	15	14	24	27	18	7	5	13	8
Meters to be billed												
Billable Meters	13,138	14,303	9,952	10,056	11,654	13,799	12,975	14,394	9,982	10,169	11,561	13,682
Non-Billable Meters	804	876	578	550	691	713	946	674	429	370	699	735
Total Meters	13,942	15,179	10,530	10,606	12,345	14,512	13,921	15,068	10,411	10,539	12,260	14,417
Total Meters Billed	12,945	14,115	9,803	9,923	11,538	13,649	12,814	14,001	9,715	9,865	11,441	13,567
Meters to be investigated	193	188	149	133	116	150	161	393	267	304	120	115
Billable Meters	13,138	14,303	9,952	10,056	11,654	13,799	12,975	14,394	9,982	10,169	11,561	13,682
Meters to be investigated - Code Red	4	30	9	1	2	4	16	8	2	1	27	27

Estimated reads as % of Total Meters to be read	6%	12%	7%	7%	9%	5%	9%	14%	11%	9%	13%	19%
No Reads as a % of Total Meters to be read	3%	3%	3%	3%	3%	3%	4%	3%	3%	3%	3%	3%
Read Meters as % of Total Meters to be read	90%	85%	90%	90%	88%	92%	88%	83%	86%	88%	84%	78%
Total Meters	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Code Red as % of Meters to be investigated	2%	9%	8%	5%	4%	6%	6%	4%	3%	2%	4%	2%
Estimated % (Excl 'No Reads')	6%	13%	7%	8%	10%	5%	9%	14%	12%	9%	13%	19%
Billable Meters as % of Total Meter Records	94%	94%	95%	95%	94%	95%	93%	96%	96%	96%	94%	95%
Non - Billable Meters as % of Total Meter Records	6%	6%	5%	5%	6%	5%	7%	4%	4%	4%	6%	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%	97%	97%	97%	99%	99%
Meters to be investigated as a % of Billable Meters	1%	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%
Billable Meters	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Code Red as % of Meters to be investigated	2%	16%	6%	1%	2%	3%	10%	2%	1%	0%	23%	23%

Appendix G – Reconciliation of invoices and system adjustments as at 31 March 2014

	Trans Rpt	GL Posting	Variance
Measured Water	3,563,619	3,570,619	(7,000)
Measured Sewerage	1,767,119	1,767,566	(447)
Unmeasured Water	1,062,868	1,059,289	3,579
Unmeasured Sewerage	1,236,314	1,239,730	(3,416)
TE	692,896	692,895	1
Sub-total	8,322,815	8,330,099	(7,284)
Discount	13	(25)	38
VAT	270,151	270,008	143
TOTAL	8,592,980	8,600,082	(7,102)

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 m²
 - b. Urban footway surface area = 17.0million m²
 - c. Total Urban road & footway surface area = 56.3million m²
- 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:

$$56.3\text{million m}^2 \times 1.14\text{m} = 64.2\text{million m}^3$$

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 element	Formula	Cost (£) Per cubic metre	Application
R (Reception)		0.1992	Run off into Storm water sewers
V (Volumetric)		0.2246	Run off into Combined sewers
R+V		0.4238	

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 24 REGULATORY ACCOUNTS (CURRENT COST)
BALANCE SHEET AS AT 31 MARCH (TOTAL)**

DESCRIPTION		UNITS DP		1	2	3	4
				2010-11	2011-12	2012-13	2013-14
A FIXED ASSETS							
1	Tangible assets	£m	3	7825.616	8147.759	8438.992	8707.701
2	Third party contributions	£m	3	-198.736	-255.418	-313.278	-384.624
B OTHER OPERATING ASSETS AND LIABILITIES							
3	Working capital	£m	3	-79.116	-80.503	-81.590	-93.032
4	Cash	£m	3	-3.272	-2.340	9.102	1.637
5	Short term deposits	£m	3	15.000	0.000	5.300	0.600
6	Overdrafts	£m	3	0.000	0.000	0.000	0.000
7	Infrastructure renewals prepayment/(accrual)	£m	3	-3.044	2.734	3.341	0.050
8	Net operating assets	£m	3	-70.432	-80.109	-63.847	-90.745
C NON-OPERATING ASSETS AND LIABILITIES							
9	Borrowings	£m	3	0.000	0.000	0.000	0.000
10	Non-trade debtors	£m	3	0.010	0.006	0.007	0.020
11	Non-trade creditors due within one year	£m	3	-3.844	-4.141	-5.218	-2.203
12	Investment - loan to group company	£m	3	0.000	0.000	0.000	0.000
13	Investment - other	£m	3	0.106	0.106	0.106	0.091
14	Corporation tax payable	£m	3	0.000	0.000	0.000	0.000
15	Ordinary share dividends payable	£m	3	0.000	0.000	0.000	0.000
16	Preference share dividends payable	£m	3	0.000	0.000	0.000	0.000
D CREDITORS: AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR							
17	Borrowings	£m	3	-737.560	-807.560	-882.560	-911.560
18	Other creditors	£m	3	-102.624	-98.978	-96.184	-95.668
E PROVISION FOR LIABILITIES AND CHARGES							
19	Deferred tax provision	£m	3	-144.282	-162.493	-187.416	-173.693
20	Post employment asset / (liabilities)	£m	3	4.586	7.253	-4.123	2.784
21	Other provisions	£m	3	-19.349	-20.679	-9.589	-10.315
F PREFERENCE SHARE CAPITAL							
22	Preference share capital	£m	3	0.000	0.000	0.000	0.000
23	Net assets employed	£m	3	6553.491	6725.746	6876.890	7041.788
G CAPITAL AND RESERVES							
24	Called up share capital	£m	3	500.000	500.000	500.000	500.000
25	Share premium	£m	3	0.000	0.000	0.000	0.000
26	Profit and loss account	£m	3	-227.538	-287.995	-355.720	-360.120
27	Current cost reserve at 31 March	£m	3	6109.339	6342.051	6560.920	6730.218
28	Other reserves	£m	3	171.690	171.690	171.690	171.690
29	Total capital and reserves	£m	3	6553.491	6725.746	6876.890	7041.788

Table 24 – CC Balance Sheet as at 31 March 2014

The retained current cost loss for the year is £12.412m. The P&L reserves in the balance sheet decreased by £4.400m. The difference of £8.012m represents the gain on the pension fund net of deferred tax, as shown below:

Retained loss for the year	£ (12.412m)
Pension scheme loss net of deferred tax	£ 8.012m
Movement in P&L Account	£ (4.400m)

- 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	*136.733	13.293	3.131	153.157
Acc. Deprec	(17.461)	-	-	(17.461)
NBV	119.272	13.293	3.131	135.696

* 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	3.004	18.361	0.275	21.640

Line 11 - Non-trade creditors due within one year

	Alpha
	£m
Lease obligation due < 1 yr	1.672

Line 18 - Other creditors

	Alpha
	£m
Lease obligation due > 1 yr	94.388

Line 21 - Other provisions

	Omega
	£m
Provisions	7.553

Significant features and movements**Line 1 - Tangible assets**

See commentary to Table 19.

Line 2 - Third party contributions

Increased by approximately £71.3m shown as follows:

	£m
Infrastructure contributions (including £59.6 m sewers adopted)	65.3
Non Infrastructure contributions (including £0.1m adoptions)	0.8
Amortisation of non-infrastructure contributions and government grants	(2.5)
Indexation	<u>7.7</u>
	<u>71.3</u>

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	8	9	
			WATER SERVICE				SEWERAGE SERVICE				TOTAL	
			INFRASTRUCTURE ASSETS	OPERATIONAL ASSETS	OTHER TANGIBLE ASSETS	SUBTOTAL	INFRASTRUCTURE ASSETS	OPERATIONAL ASSETS	OTHER TANGIBLE ASSETS	SUBTOTAL		
A GROSS REPLACEMENT COST												
1	Gross replacement cost at 1 April	£m	3	3256.150	995.454	47.147	4298.751	3262.654	1510.926	49.374	4822.954	9121.705
2	AMP adjustment	£m	3									
3	RPI adjustment	£m	3	79.968	23.155	1.096	104.219	79.865	34.275	1.409	115.549	219.768
4	Disposals	£m	3	0.000	-1.744	-2.919	-4.663	0.000	-1.234	-5.316	-6.550	-11.213
5	Additions	£m	3	24.497	23.372	3.492	51.361	69.704	78.343	2.747	150.794	202.155
6	Gross replacement cost at 31 March	£m	3	3360.615	1040.237	48.816	4449.668	3412.223	1622.310	48.214	5082.747	9532.415
B DEPRECIATION												
7	Depreciation at 1 April	£m	3	51.987	227.532	31.743	311.262	1.277	333.257	36.917	371.451	682.713
8	AMP adjustment	£m	3									
9	AMP adjustment - gross MEA revaluation	£m	3									
10	AMP adjustment - amendment to remaining useful economic life	£m	3									
11	RPI adjustment	£m	3	1.282	5.561	0.776	7.619	0.028	8.249	0.904	9.181	16.800
12	Disposals	£m	3	0.000	-1.257	-2.912	-4.169		-0.872	-5.216	-6.088	-10.257
13	Charge for year	£m	3	0.021	47.091	4.826	51.938	1.418	77.143	4.959	83.520	135.458
14	Depreciation at 31 March	£m	3	53.290	278.927	34.433	366.650	2.723	417.777	37.564	458.064	824.714
15	Net book amount at 31 March	£m	3	3307.325	761.310	14.383	4083.018	3409.500	1204.533	10.650	4624.683	8707.701
16	Net book amount at 1 April	£m	3	3204.163	767.922	15.404	3987.489	3261.377	1177.669	12.457	4451.503	8438.992

Table 25 – Analysis of Fixed Assets by Asset Type (Total)**Commentary and Methodology****Methodology**

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 2013 have been brought forward from the total closing balances for gross replacement cost and depreciation at 31 March 2013. 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 2013, 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 an impairment of surplus lands, buildings and civils during the year totalling £89.8k following a review of assets for disposal by McKibbin & Co.

Disposals

Disposals during the year mainly consisted of surplus land, buildings, mobile plants (lorries and vans) and IT assets. All disposals have depreciation in the month of disposal.

Decommissioned assets

A number of assets (NCRC - £25,612,062.33) were decommissioned during the year. Decommissioned assets are assets which 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 and 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)	166,426
Add: Water and sewer connections	2,623
Add: Capital maintenance Omega and Kinnegar	1,295
Add: adopted assets – infrastructure	59,471
Add: adopted assets – non-infrastructure	95
Less: de-capitalised assets	(87)
Add: capitalised interest	3,911
Less: expenditure classified as opex under IFRS	(988)
Other adjustments	360
Total additions per statutory accounts	233,106
Less Capital maintenance Omega and Kinnegar	(1,295)
Add back: IRE treated as opex repairs under IFRS	988
Less: interest capitalised	(3,911)
Less: IRE	(30,118)
Add: PPP residual interest	3,385
Total additions per regulatory accounts	202,155

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 £1,483,000, 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 £3,788,000 which is included in Table 25 under specialised operational civil. The total residual interest at 31 March 2014 is £20,212,000 (31 March 2013: £16,424,000).

Classification difference between Regulatory Accounts Note 5 - Current cost analysis of tangible fixed assets by asset type and Table 25.

Additions for the year for Capital studies - infrastructure have been incorrectly classified as additions to Specialised Operational Assets in Note 5 of the Regulatory Accounts. These should have been shown as additions to Infrastructure.

These additions have been correctly classified to Infrastructure Assets in Table 25.

The value of these additions is as follows:

Water	£1.802m
Sewerage	£1.241m
Total	£3.043m

Depreciation charge for year

Current cost depreciation charge during the year was calculated based on the opening GCRC at 1 April 2013. 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 £93,882,592.85 (12/13: £98,277,726.48) as at 31 March 2014,

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**

				1	2	3	4
				2010-11	2011-12	2012-13	2013-14
DESCRIPTION		UNITS	DP				
1	Stocks	£m	3	1.863	2.177	2.379	2.021
2	Trade debtors - measured household	£m	3	0.000	0.000	0.000	0.000
3	Trade debtors - unmeasured household	£m	3	0.000	0.000	0.000	0.000
4	Trade debtors - measured non household	£m	3	10.908	7.191	7.596	8.037
5	Trade debtors - unmeasured non household	£m	3	0.000	3.084	0.402	2.764
6	Other trade debtors	£m	3	1.021	2.084	0.612	0.383
7	Measured income accrual	£m	3	8.761	12.393	10.777	9.180
8	Prepayments and other debtors	£m	3	8.097	9.025	9.431	6.783
9	Trade creditors	£m	3	-9.498	-11.711	-2.620	-6.656
10	Deferred income - customer advance receipts	£m	3	-1.342	-3.768	-1.164	-3.459
11	Short term capital creditors	£m	3	-52.697	-56.206	-56.699	-59.734
12	Accruals and other creditors	£m	3	-46.229	-44.772	-52.304	-52.351
13	Total working capital	£m	3	-79.116	-80.503	-81.590	-93.032

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
3.004	18.361	0.275	21.640

Significant movements from last year**Line 4 - Trade debtors - measured non household**

This has increased from £7.6m to £8.0m (5.3%).

Line 5 - Trade debtors - unmeasured non household

This has increased from £0.4m in 2012-13 to £2.8m. This reflects the fact that the billing run for the unmeasured customers for 2014-15 was completed before 31st March 2014 whereas in 2013-14 this billing run occurred in the first few months of the new financial year. A similar spike in the value of this category was experienced at 31st March 2012 as the timing of the billing run for 2012-13 was also before the year end close.

Line 6 - Other trade debtors

This has decreased from £0.4m to £0.6m (33.3%).

Line 7 - Measured income accrual

This has decreased by £1.6m (14.8%) over the period.

Line 9 - Trade creditors

Trade creditors have risen by £4.0m (154.0%) in the period. This was the result of managing cash resources at year end with the result that a smaller than normal level of payment run was carried out at the end of March 2014.

Line 10 - Deferred income – customer advance receipts

Deferred income – customer advance receipts have risen by £2.295m (197.2%) in the period. Related to line 5 above, this is primarily due to the fact that the billing run for the unmeasured customers for 2014-15 was completed before 31st March 2014. These bills are for 12 months in advance and the income is deferred and will be released uniformly during 2014-15. The unmeasured billing for 2013-14 occurred in the first months of the 2013-14 year and consequently the deferred income at 31st March 2013 was at a much lower level.

Line 11 - Short term capital creditors

Capital accruals have risen by approximately £3.0m (5.4%). This is consistent a rise in relevant* capital additions of 4.1% from £159.9m in 2013 to £166.4m in 2014.

*relevant additions for the capital creditor 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)**

				1	2	3	4
DESCRIPTION				2010-11	2011-12	2012-13	2013-14
	UNITS	DP					
1	Current cost reserve at 1 April	£m	3	5779.799	6109.339	6342.051	6560.920
2	AMP adjustment	£m	3	0.000	0.000	0.000	0.000
A RPI ADJUSTMENTS							
3	Fixed assets	£m	3	382.447	273.081	260.354	202.983
4	Working capital adjustment	£m	3	-4.898	-2.824	-2.641	-2.001
5	Financing adjustment	£m	3	-40.427	-30.450	-30.464	-23.962
6	Grants and third party contributions	£m	3	-7.582	-7.095	-8.380	-7.722
7	Current cost reserve at 31 March	£m	3	6109.339	6342.051	6560.920	6730.218

Table 27 – Movement on current cost reserve**Working capital adjustment**

The working capital adjustment includes opening stock at 1st April 2013 plus all the opening short – term debtors and creditors at 1st April 2013, with the following exclusions from the calculation:

• Stock		
Stock relating to unappointed activities		£0.008m
• Debtors		
Interest receivable		£0.005m
Debtors relating to unappointed activities		£0.380m
Debtors relating to the maturity of the loan stock in WRc		£0.015m
• Creditors		
Interest payable		£0.146m
Cash bond interest payable		£0.386m
Creditors relating to unappointed activities		£0.931m
Deferred grants and contributions < 1yr		£0.832m
PPP Finance lease creditor < 1yr		£1.672m

The following indices have been used and applied to the opening working capital balance at 1 April 2013:

RPI	2014	2013
Year end RPI	254.8	248.7
Change in 2013-14	2.45275%	

Working capital adjustment = opening working capital at 1 April 2013 x change in RPI 2013-2014 = £81,590k x 2.45275% = £2,001k

Financing adjustment

The financing adjustment is calculated using opening balances at 01.04.13 as follows:

	£m
Opening net assets	6,876.890
Less Opening net fixed assets	<u>8,125.714</u>
	(1,248.824)
Add back: working capital	<u>81.590</u>
=Opening net finance	-1,167.234
Less:	
Ordinary share dividends payable	0.000
Deferred tax provision	187.416
Less:	
Pension asset	4.123
Add back:	
Deferred tax liability on pension asset	(1.231)
= Revised opening net finance	(976.926)
X RPI	<u>2.45%</u>
Financing Adjustment	<u>23.962</u>

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
DESCRIPTION				2010-11	2011-12	2012-13	2013-14
	UNITS	DP					
1	Net cashflow from operating activities	£m	3	151.177	179.166	181.015	190.580
A RETURN ON INVESTMENTS & SERVICING OF FINANCE							
2	Interest received	£m	3	0.212	0.114	0.134	0.114
3	Interest paid	£m	3	-34.640	-39.337	-42.208	-43.723
4	Interest in finance lease rentals	£m	3	-12.215	-11.750	-11.913	-6.933
5	Non-equity dividends paid	£m	3	0.000	0.000	0.000	0.000
6	Net cashflow from returns on investments & servicing of finance	£m	3	-46.643	-50.973	-53.987	-50.542
B TAXATION							
7	Taxation (paid)/received	£m	3	0.000	0.000	0.000	0.000
C CAPITAL EXPENDITURE AND FINANCIAL INVESTMENT							
8	Gross cost of purchase of fixed assets	£m	3	-156.548	-153.100	-130.590	-135.971
9	Receipts of grants and contributions	£m	3	6.887	5.618	5.757	6.586
10	Infrastructure renewals expenditure	£m	3	-24.897	-35.847	-31.368	-30.118
11	Disposal of fixed assets	£m	3	0.251	0.304	1.177	1.164
12	Movements on long term loans to group companies	£m	3	0.000	0.000	0.000	0.000
13	Net cashflow from investing activities	£m	3	-174.307	-183.025	-155.024	-158.339
D ACQUISITIONS AND DISPOSALS							
14	Acquisitions and disposals	£m	3	0.000	0.000	0.000	0.000
E EQUITY DIVIDENDS							
15	Equity dividends paid	£m	3	-35.570	-25.604	-26.587	-21.391
F MANAGEMENT OF LIQUID RESOURCES							
16	Net cashflow from management of liquid resources	£m	3	-5.000	15.000	-5.300	4.700
17	Net cashflow before financing	£m	3	-110.343	-65.436	-59.883	-34.992
G FINANCING							
18	Capital in finance lease rentals	£m	3	-3.278	-3.632	-3.675	-1.473
19	New bank loans taken out	£m	3	110.000	70.000	75.000	29.000
20	Repayment of bank loans	£m	3	0.000	0.000	0.000	0.000
21	Proceeds from share issues	£m	3	0.000	0.000	0.000	0.000
22	Net cash inflow from financing	£m	3	106.722	66.368	71.325	27.527
23	Increase/(decrease) in cash in the year	£m	3	-3.621	0.932	11.442	-7.465

Table 28 – Cashflow statement**Significant movements from last period****Line 1 - Net cashflow from operating activities**

This has increased by £9.565m (5.3%). The reconciliation of operating profit to net cashflow from operating activities is shown in Table 29.

Line 3 – Interest paid

Interest paid has increased by 3.6% from £42.208m to £43.723m. This is consistent with an additional loan drawdown of £29m in 2013-2014. 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)

Line 4 - Interest in finance lease rentals

The Alpha project during 2013-2014 gave rise to £6.933m (2013: £11.913m) interest payable on the associated finance lease. This decrease arises from the revision to the financial model that breaks the PPP unitary charge into the various Profit and Loss Account and Balance Sheet elements.

Line 8 - Gross cost of purchase of fixed assets

These have increased by £35.499m (27.2%). This is consistent with capital expenditure plans for 2013-14 and the movement in capital creditors across the period.

Line 10 - Infrastructure Renewals Expenditure

IRE for 2013-2014 compared to 2012-2013 can be shown as follows:

IRE	2013-2014	2012-2013	Increase/(Decrease) in period	Increase/(Decrease) in period
	£m	£m	£m	%
Water	22.391	22.593	(0.202)	(0.9)
Sewerage	7.727	8.775	(1.048)	(11.9)
Total	30.118	31.368	(1.250)	(4.0)

Both Water and Sewerage IRE have decreased over the period. This is consistent with the planned level of base maintenance agreed with the Regulator within PC13.

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 decreased by £4.7m from the end of 2012-2013 to the end of 2013-2014 with a consequent increase in cashflow. The balance on deposit at the end of 31st March 2014 is £0.6m.

Line 18 - Capital in finance lease rentals.

An amount of £1.473m was made in payment against the Alpha PPP finance lease.

Line 19 - New bank loans taken out

In 2013-2014 £29m of additional loan notes were drawn down from DRD. 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:

Line 1 - Net cashflow from operating activities.

This is summarised in Table 29 as follows:

1	Current cost operating profit	£m	19.799
2	Working capital adjustment	£m	(2.001)
3	Movement in working capital	£m	8.388
4	Depreciation	£m	135.458
5	Current cost profit on sale of fixed assets	£m	(0.208)
6	Infrastructure renewals charge	£m	33.409
7	Other non-cash profit and loss items	£m	(4.265)
8	Net cash flow from operating activities	£m	190.580

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 5.

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 £1.516m 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)**

				1	2	3	4
				2010-11	2011-12	2012-13	2013-14
DESCRIPTION		UNITS	DP				
1	Current cost operating profit	£m	3	8.893	2.181	19.872	19.799
2	Working capital adjustment	£m	3	-4.898	-2.824	-2.641	-2.001
3	Movement in working capital	£m	3	7.453	-2.122	0.595	8.388
4	Receipts from other income	£m	3	0.000	0.000	0.000	0.000
5	Depreciation	£m	3	132.147	157.761	150.895	135.458
6	Current cost profit on sale of fixed assets	£m	3	-0.079	0.285	-0.303	-0.208
7	Infrastructure renewals charge	£m	3	29.393	30.069	30.761	33.409
8	Other non-cash profit and loss items	£m	3	-21.732	-6.184	-18.164	-4.265
9	Net cash flow from operating activities	£m	3	151.177	179.166	181.015	190.580

Table 29 – Reconciliation of operating profit to net cashflow from operating activity**Significant movements from last period****Line 1 - Net cashflow from operating activities**

This has increased by £27.989m (18.5%). The reconciliation of operating profit to net cashflow from operating activities is shown in Table 29.

Line 3 - Interest paid

Interest paid has increased by 13.6% from £34.640m to £39.337. This is consistent with an additional loan drawdown of £70m in 2011-2012. 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)

Line 4 - Interest in finance lease rentals

The Alpha project during 2011-2012 gave rise to £11.750m (2010: £12.215m) interest payable on the associated finance lease.

Line 8 - Gross cost of purchase of fixed assets

These have decreased by £3.448m (2.2%). This is consistent with capital expenditure plans for 2011-12 and the movement in capital creditors across the period.

Line 10 - Infrastructure Renewals Expenditure

IRE for 2011-2012 compared to 2010-2011 can be shown as follows:

IRE	2011-2012	2010-2011	Increase/(Decrease) in period	Increase/(Decrease) in period
		£m	£m	%
Water	26.803	18.844	7.959	42.2
Sewerage	9.044	6.053	2.991	49.4
Total	35.847	24.897	10.950	44.0

Both Water and Sewerage IRE have increased over the period. This is consistent with the planned level of base maintenance agreed with the Regulator within PC10.

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 decreased by £15m from the end of 2010-2011 to the end of 2011-2012 with a consequent increase in cashflow. The balance on deposit at the end of 31st March 2012 is nil.

Line 18 - Capital in finance lease rentals

An amount of £3.632m was made in payment against the Alpha PPP finance lease.

Line 19 - New bank loans taken out

In 2011-2012 £70m of additional loan notes were drawn down from DRD. 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:

Line 1 - Net cashflow from operating activities

This is summarised in Table 29 as follows:

1	Current cost operating profit	£m	2.181
2	Working capital adjustment	£m	(2.824)
3	Movement in working capital	£m	(2.122)
4	Depreciation	£m	157.761
5	Current cost profit on sale of fixed assets	£m	0.285
6	Infrastructure renewals charge	£m	30.069
7	Other non-cash profit and loss items	£m	(6.184)
8	Net cash flow from operating activities	£m	179.166

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 5.

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 £0.236m 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.

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 2013/14 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 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.

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 2013/14 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 refinement will be planned during 2014/15 to allow for more automation for the completion of the tables.

The only change in allocation rules which affect AIR 14 which comparing to the PC13 business plan are related to clarification sought in PC15 query no 27.1 and 27.1A. These additional clarifications will be embedded in future projects where appropriate. The effect on AIR 13 is likely to be minimal.

Assets Adopted at Nil Cost

Sewer adoptions paid by third parties of £59.471 are included in column 4, line 7 of Table 32 within Sewerage infrastructure enhancements. Sewerage Pumping Stations paid by third parties of £0.095m are included 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 value of sewer adoptions in 2013/14 has increased when compared to 2012/13. The following is a brief explanation for this increase:

- Last year saw an increase in the workload volume of final adoption certificates processed. In response to and following on from the interest of the DRD Committee in unadopted developments, NI Water took on additional staff to focus on two areas (i) backlog sites and (ii) enforcement sites.

- In association with DRD Roads Service work has progressed on both these areas, plus Developers are being pushed by their financial providers to reduce bonds and liability, and hence we have had an increase in the number of Article 161 sites where the developer completed works to enable adoption of site sewers.
- On another new area of the work – we have adopted several sites with over engineered pipes and flow controls to meet the conditions of Sustainable Drainage Systems – i.e. greenfield runoff as stipulated by Rivers Agency. This included large diameter pipes and e.g. Hydrobrakes which are an recorded in the AIR returns

The calculation of gross asset valuation for adopted sewerage assets is based on the unit costs derived for PC10 which was indexed to 13/14 prices by COPI. The unit costs are applied by diameter banding and total lengths laid. The unit costs adopted in PC10 were developed from historic actual costs of projects completed by NI Water Service and reported in 07/08 prices.

Total Asset Additions reconciliations

- Total asset additions – Water Service – Check to Table 25 line 5 col 4.
For AIR 14 the reported numbers in these two tables are as follows:
Table 25 – £51.361m
Table 36 - £49.532m

The difference in the above 2 figures is explained as follows:

- a) PPP Alpha capital maintenance of [REDACTED] is not included in Table 36
- b) £-14k included in Table 25 relates to Decapitalised projects in 12/13.
- c) Adjustment of £360k for expenditure on Silent Valley visitors centre not treated as an addition in 2012-13 and not included in Table 36.

- Total asset additions – Sewerage Service – Check to Table 25 line 5 col 8.
For AIR 14 the reported numbers in these two tables are as follows:
Table 25 – £150.794m
Table 36 - £147.482m

The difference in the above 2 figures is explained as follows:

- d) PPP Omega ([REDACTED]) and PPP Kinnegar ([REDACTED]) residual asset additions not included in Table 36.
- e) £-73k included in Table 25 relates to Decapitalised projects in 12/13.

Expenditure to reduce leakage

The table below provides a breakdown of the leakage expenditure in 2013/14. This includes the purpose allocations which have followed the principle as set out in PC10 Final Determination.

Activity	2013/14 actual spend per category £m	Purpose allocation
Leakage detection and repair costs	3.941	OPEX
Leakage detection costs - capex	0.538	Base
Leakage infra replacement repair costs - capex	0.229	Base
Leakage detection equip	0.067	Base
Leakage software upgrades and developments	0.009	Base
New leakage technology	0.000	Base
DMA studies	0.421	Base
Trunk Main studies	0.087	SDB Growth
DMA optimisation	0.213	SDB Growth
Water balance asset data assessments	0.053	Base
ELL reviews	0.133	Base
Pressure Management	0.474	SDB Growth
PRV replacements	0.256	Base
GSM Loggers/Meter studies/Meter replacement	0.812	Base
Other	0.000	Base
Total (OPEX)	3.941	
Total (Capex)	3.293	
Total Leakage investment	7.234	

Capital programme variance

The capital programme for 2013/14 when compared to the PC13 final determination has under delivered in the 'Water Service' and outperformed in budget terms in the 'Sewerage Service'.

Given that NI Water funding is based on a nominal basis this table does not recognise the effect that COPI is having across the capital programme. NI Water successfully delivered the PE funding for 13/14 (Nominal PC13 amount of £167m). When taking into account the PC13 COPI assumptions compared with actual COPI a variance of -£3.8m has developed which equates to OUTPUTS which NI Water no longer have funding to deliver during PC13. This gap is highly likely to widen in 14/15 with COPI continuing to track upward.

The main reasons for variance in 13/14 are as follows:

- PE expenditure funding arrangements. The lack of year end flexibility means that NI Water has to manage to spend the funding within the year. In the last year of PC10 there were delays in some of the frameworks being renewed and this meant that Base Maintenance projects were advanced to achieve PE funding in 12/13. This had a significant knock on effect into 13/14 with significant funding being committed. This explains the large overspend on Wastewater non infra.
- The complexity of Framework tendering within the Public expenditure guidelines is challenging and any delay in Framework renewal means that sub-programme spend can be delayed.
- NI Water is actively managing the Capital programme to minimise the effect of changes over the regulatory period and to ensure that the overall programme balance is maintained as closely as possible.

2013/14 Q4 Capital Investment Monitoring Return

Company baseline

A PC13 Baseline is included in this CIM submission. This baseline is based on the capital programme as submitted to UR as part of the submissions prior to the PC13 Final Determination. This aligns with the final determination prior to the application of COPI adjustment to the 2010/11 price base as required by the UR.

The PC13 Baseline has been adjusted during 2013/14 for the following:

- a) The nominated MIMP projects (JI024 – JI028) now have a baseline allocation. The baseline on the Parent Rehab Project (JI053) has been reduced by the equivalent amount.
- b) Ballycranbeg WwTW (KS887). On the CIM this was originally shown against KS111 (Ards South), which is the Parent Project. Baseline has been transferred to KS887 - this project is the Nominated Output for PC13.
- c) Small WwTW – The baseline for the PC13 Small WwTW has been transferred from KI470 to KI542, which is the PC13 delivery project.

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 2013/14 (excluding contributions) as per ORACLE and reconciled to the CIM submission shown in money of the day.

	£m
Total Gross capital expenditure as per ORACLE	167.566
EP capital and M&G Capital from CPMR reported to CIM	115.868
Operations capital from CPMR	25.731
M & G Capital from CPMR	14.408
Capitalised Salaries and overheads	11.543
Rounding from ORACLE to CAPTRAX/CPMR	0.016
Reconciled Total	167.566

During the 2013/14 period there has been capital income in the form of Grants and Contributions totalling to £5.894m. This figure is not included on the CIM (Table 40) submission (as per the UR guidance).

The programme codes match the PC13 programme coding structure and the time period coding has been improved to align with the PC13 coding structure. NI Water will continue to improve the period coding and CPMR has been developed to hold this information.

Inflation assumptions (Table 40 and Table 36a)

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 and no inflation assumptions are applied within CPMR.

Column1	2010/11	2011/12	2012/13	2013/14	2014/15
PC13 FD assumed Indices	107.375	109.925	112.673	115.490	118.377
Current actual and projected indices (Q4 13/14)	107.375	109.950	113.575	117.825	121.124

With COPI tracking ahead of the PC13 FD baseline the total funding available in PC13 'real prices' has reduced in excess of £6m which will have an impact of reducing the number of projects being delivered in PC13 given that nominal funding is fixed.

Reconciliation with Table 36

Table 36 - Water service nominal expenditure				
Gross capital expenditure - Water Service	T35 £m	CIM £m	Variance £m	Variance %
1 MNI (gross of grants and contributions)	16.825	17.138	0.313	1.83
2 Infrastructure renewals expenditure (gross)	22.391	22.624	0.233	1.03
3 Capex: Total quality enhancement programme	14.396	14.467	0.071	0.49
4 Capital expenditure - customer service	3.262	3.131	-0.131	-4.20
5 Capital expenditure - supply demand balance	15.049	14.814	-0.235	-1.59
6 Gross Capital expenditure - Water Service	71.923	72.174	0.251	0.35

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)	50.986	50.362	-0.624	-1.24
8 Infrastructure renewals expenditure (gross)	7.727	8.226	0.499	6.07
9 Capex: Total quality enhancement programme	21.238	21.126	-0.112	-0.53
10 Capital expenditure:customer service	3.955	3.733	-0.222	-5.95
11 Capital expenditure supply demand balance	11.736	11.925	0.189	1.58
12 Gross Capital expenditure - Sewerage Service	95.643	95.373	-0.270	-0.28

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 13 the Capital salaries and overheads was applied by examining each of the 3 elements of the programme namely, CWP, M & G and operations capital and assigning S & O 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.

Changes on the CIM since draft submission

The following changes have been made post Q4 submission:

- Service Allocations and for the summary lines reflecting operational capital spend have been revised to reflect the actual project outputs over the year. Purpose allocations did not require any adjustment.

Sixteen combinations Summary**2013/14 Current actual 16 combinations summary showing expenditure £m (nominal)**

	Quality Enhancement	Base service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	10.66	22.62	1.58	12.38	47.24
Water Non-infrastructure	3.81	17.14	1.55	2.43	24.94
Sewerage Infrastructure	3.55	8.23	1.60	4.31	17.69
Sewerage Non-infrastructure	17.57	50.36	2.13	7.62	77.68
Totals	35.59	98.35	6.86	26.74	167.55

2013/14 Current actual 16 combinations summary in %

	Quality Enhancement	Base service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	6.4%	13.5%	0.9%	7.4%	28.4%
Water Non-infrastructure	2.3%	10.2%	0.9%	1.5%	14.6%
Sewerage Infrastructure	2.1%	4.9%	1.0%	2.6%	10.6%
Sewerage Non-infrastructure	10.5%	30.1%	1.3%	4.5%	46.3%
Totals	21.2%	58.7%	4.1%	16.0%	100.0%

PC13 16 combinations FD baseline (nominal) showing expenditure across the PC13 programme

	Quality Enhancement	Base service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	18.04	49.83	3.18	33.98	105.02
Water Non-infrastructure	12.69	34.60	3.97	6.45	57.71
Sewerage Infrastructure	15.54	19.89	6.93	10.80	53.16
Sewerage Non-infrastructure	28.41	58.12	3.74	17.61	107.89
Totals	74.67	162.44	17.82	68.84	323.77

PC13 16 combinations summary showing expenditure by % across the PC13 programme

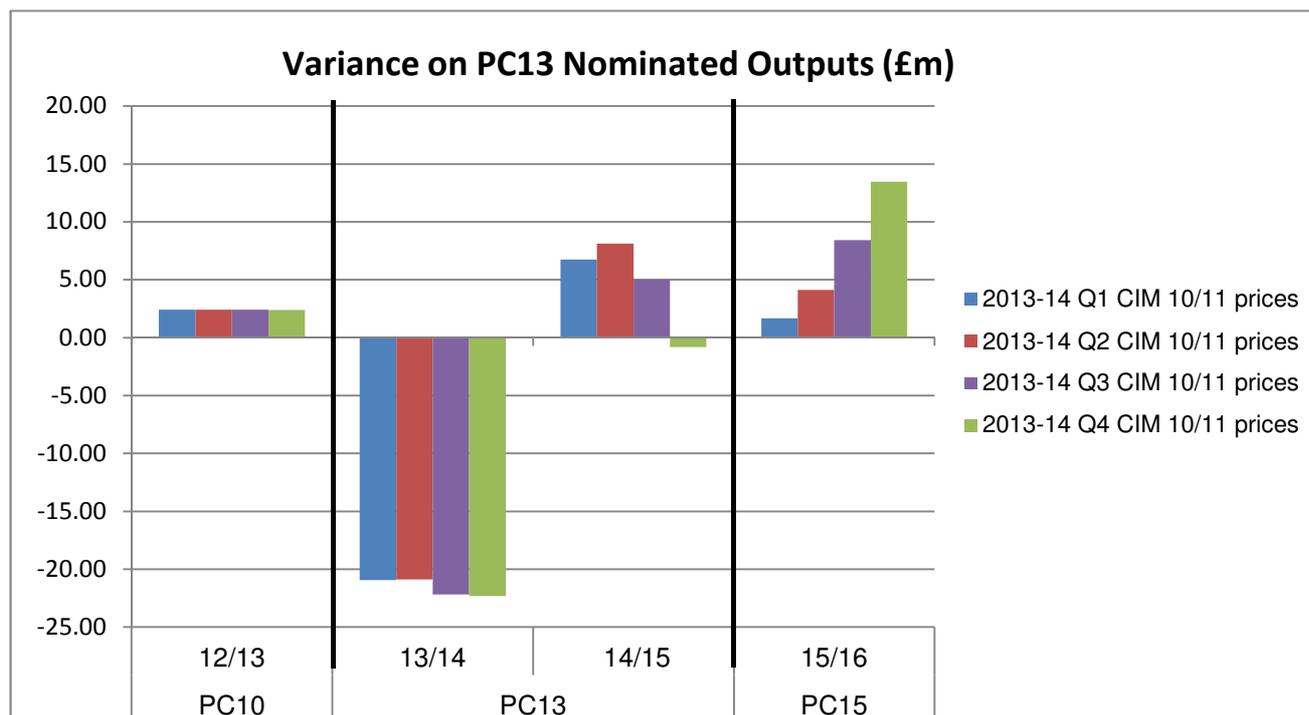
	Quality Enhancement	Base service provision	Enhanced service levels	Supply Demand Balance	Totals
Water Infrastructure	5.6%	15.4%	1.0%	10.5%	32.4%
Water Non-infrastructure	3.9%	10.7%	1.2%	2.0%	17.8%
Sewerage Infrastructure	4.8%	6.1%	2.1%	3.3%	16.4%
Sewerage Non-infrastructure	8.8%	18.0%	1.2%	5.4%	33.3%
Totals	23.1%	50.2%	5.5%	21.3%	100.0%

Although expenditure on Base Maintenance is higher than the baseline in 2013/14, it is anticipated that PC13 QBEG totals will broadly be achieved.

CIM summary Table

Program me Code	Title	Current Actual (YTD)	Baseline Nominal		Current actual or projected £m	
			13/14	Total	13/14	Total
0	Staff salaries and on-costs	11.543	10.05	20.07	11.54	24.22
1	Base maintenance (Water)	0.646	3.82	8.10	0.65	4.43
2	Base maintenance (Sewerage)	26.144	11.09	18.95	26.14	36.38
3	Water resources	2.269	1.80	2.02	2.27	3.71
4	Water treatment works	3.075	2.45	8.21	3.08	10.55
5	Water trunk mains	5.807	11.38	27.12	5.81	24.88
6	Service reservoirs and clear water tanks	0.086	0.85	1.63	0.09	1.28
7	Service reservoir rehab	3.449	4.61	8.17	3.45	7.77
8	Water mains rehabilitation	28.704	25.19	50.75	28.70	57.77
9	Leakage	3.209	3.06	6.03	3.21	6.21
10	Ops capital Water (Base)	7.873	7.94	15.86	7.87	15.21
12	Sewerage Maintenance, Flooding and DG5	15.330	20.89	40.36	15.33	32.29
15	Wastewater treatment (carry over projects)	3.051	1.47	3.05	3.05	3.83
16	Wastewater treatment (new starts)	20.452	25.16	42.81	20.45	44.44
17	Small wastewater treatment works	1.971	5.32	7.34	1.97	5.72
18	Ops Capital Sewerage (base)	12.347	7.79	15.54	12.35	22.05
19	Miscellaneous	2.303	2.30	4.58	2.30	4.38
20	M&G	14.396	13.32	26.23	14.40	31.44
23	Minor Water mains repairs, and requisition	1.418	3.74	6.75	1.42	3.66
24	Minor Sewer repairs and requisitions	3.476	3.83	7.63	3.48	10.42
98	Additional Outputs Programme	0.000	1.88	2.59	0.00	0.00
	Totals	167.55	167.93	323.77	167.55	350.64
99	Management Adjustment				0.00	-25.35
	Total inc MA (Gross)				167.55	325.29

Nominated Outputs



- Refer to Table 40a commentary for progress on nominated outputs.
- Draft consolidated change protocol submitted to the Utility Regulator for review and comment.
 - 2 enhancement-driven WwTW schemes to be substituted.
 - 38 of 84 PC13 named UIDs will not achieve beneficial use, but 8 PC10 carryover UIDs and 32 additional UIDs will achieve beneficial use in PC13, increasing the total number of UIDs delivered in PC13 from a target of 84 to 86.
 - 3 additional nominated outputs have been proposed: 2 water resource schemes on Rathlin Island, and the Beragh storm pumping station.

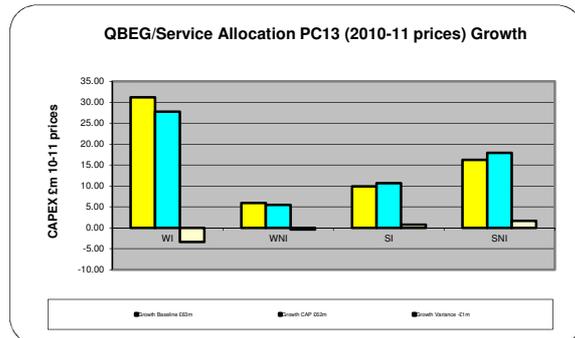
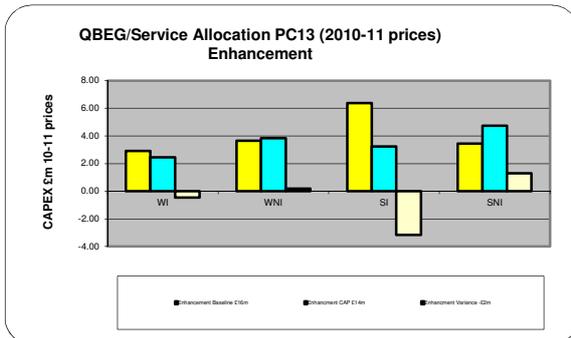
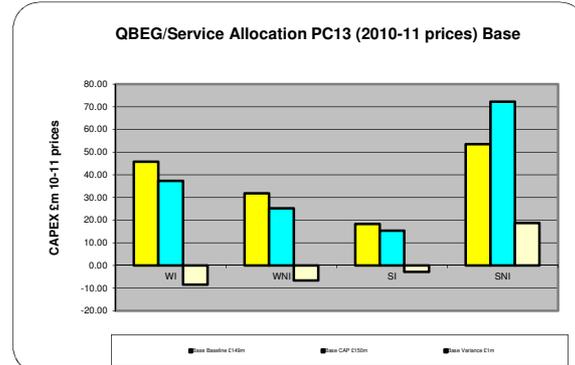
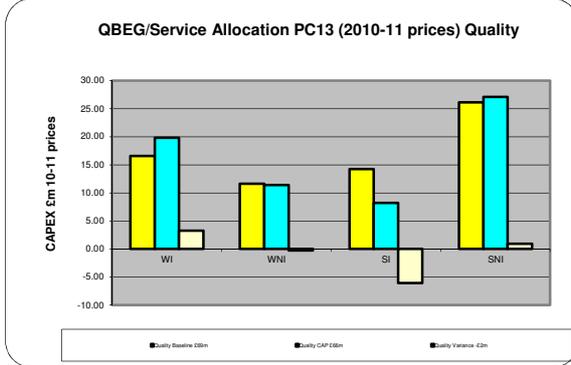
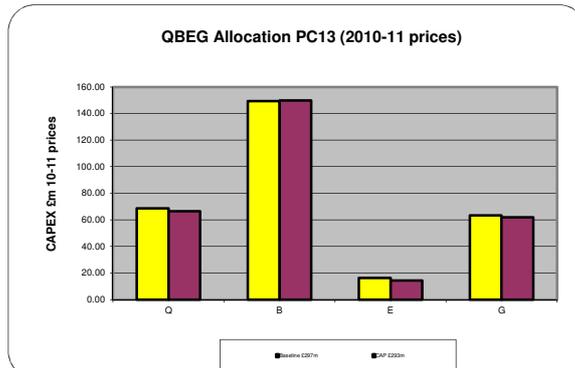
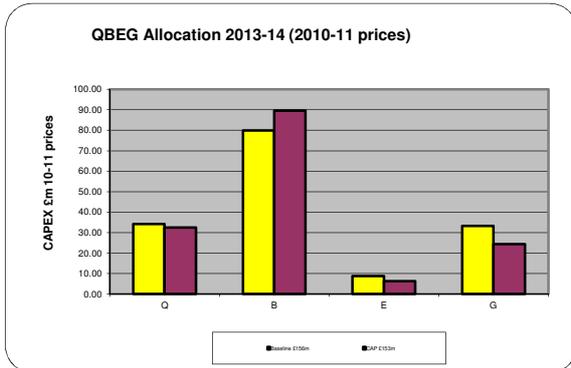
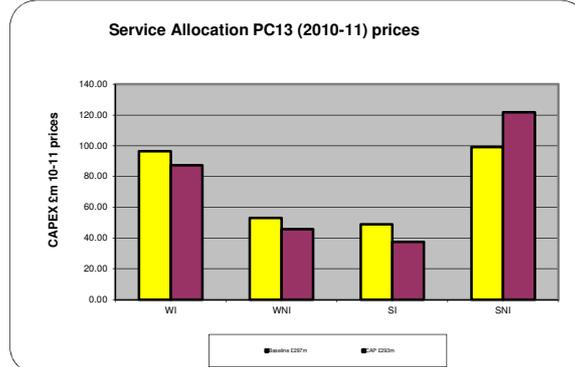
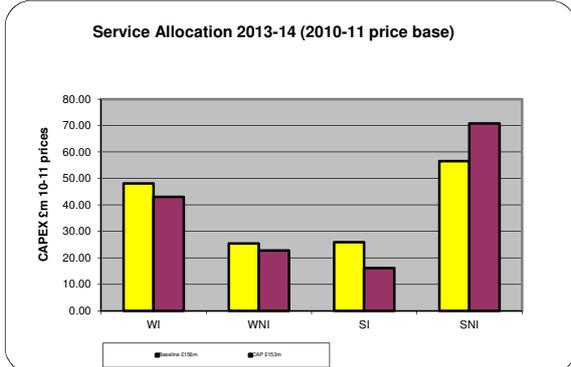
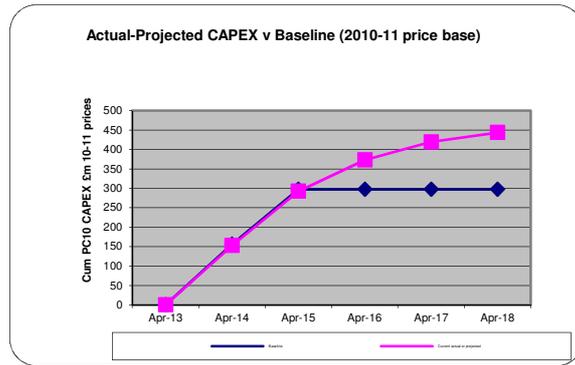
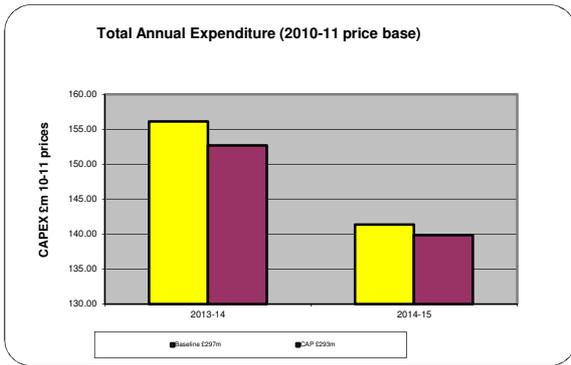
Water

- 2 of the 3 nominated trunk mains (Ballydougan-Newry and Castor Bay-Belfast) are profiled with a forecast beneficial use (BU) date at the end of March 2015. These projects will be carefully managed to mitigate the risk of BU slippage into PC15.
- All 3 nominated WTWs (Killylane, Dorisland and Killyhevlin) are profiled with a forecast beneficial use (BU) date of 31/03/15. These projects will be carefully managed to mitigate the risk of BU slippage into PC15.
- Crieve Service Reservoir is profiled with a forecast beneficial use (BU) date of the end of March 2015. This project will be carefully managed to mitigate the risk of BU slippage into PC15.
- Castor Bay to Belfast
 - The OJEU Procurement for the Project Management is complete and awarded.
 - Construction contract awarded and started on site.
 - Beneficial Use date - March 2015.

Sewerage

- Feasibility studies have indicated that a number of properties planned for removal from the DG5 registers are not actually at risk of flooding. Also, NI Water has completed work to remove several properties from the DG5 flood risk register, but necessary activities by Rivers Agency have yet to be completed. The matter is being pursued with Rivers Agency.
- Some DAP schemes have been delayed due to the impact of public realm activity and land acquisition issues. Agreement in principle has been reached with NIEA regarding the inclusion of new, additional UIDs. There is also potential to agree a number of SPS upgrades as UIDs.
- Change protocol will be required to substitute Aghagallon and Castle Archdale WwTW for Robinsonstown and Clabby WwTW (which will not achieve beneficial use in PC13).
- Ballymartin and Blackrock WwTWs are being enhanced as part of a single project (KS389). Ballymartin WwTW will achieve beneficial use in PC13, whilst Blackrock will become operational in early PC15.
- Kilmore WwTW (forecast BU 01/08/2016) can be delivered in PC13 if work at Annacloy WwTW is undertaken.
- Nixon's Corner WwTW and Artigarvan WwTW are profiled with a forecast beneficial use (BU) date of 31/03/15. These projects will be carefully managed to mitigate the risk of BU slippage into PC15.
- Base maintenance projects in excess of £1m each will be completed at 4 additional WwTWs: Lisnaskea, Newtownbreda, Dunmurry and Ballyclare
- Some slippage in small WwTW tender award in 2013/14.
- Sicily Park
 - NI Water contractor has removed a number of services from existing culverts to allow Rivers Agency to adopt same (Drainage Council – Feb 2014). Work identified in initial scope completed in Oct 2013.
 - Trial hole investigations to determine ground conditions in preparation for the main project also complete.
 - Business Case nearing completion.

Regulatory Dashboard



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			TOTAL
			INFRASTRUCTURE ASSETS	NON-INFRASTRUCTURE ASSETS	SUBTOTAL	INFRASTRUCTURE ASSETS	NON-INFRASTRUCTURE ASSETS	SUBTOTAL	
A NIW ADDITIONS -NEW ASSETS (ENHANCEMENT)									
1	Water resource facilities	£m	3	0.322	0.552	0.874			0.874
2	Water treatment works	£m	3		3.312	3.312			3.312
3	Water distribution mains	£m	3	24.060	1.460	25.520			25.520
4	Service reservoirs and water towers	£m	3		0.367	0.367			0.367
5	Pumping stations	£m	3		0.547	0.547			0.547
6	Water management and general	£m	3	0.115	1.973	2.087			2.087
7	Sewerage	£m	3				69.173	0.266	69.440
8	Sea outfalls and headworks	£m	3				0.096	-0.005	0.091
9	Sewage treatment works	£m	3					14.194	14.194
10	Sludge treatment works	£m	3					1.676	1.676
11	Sludge disposal	£m	3				0.000	0.000	0.000
12	In-line pumping stations	£m	3					7.201	7.201
13	Terminal pumping stations	£m	3					1.925	1.925
14	Sewerage management and general	£m	3				0.166	1.803	1.969
15	Total infrastructure additions (Enhancement)	£m	3	24.497		24.497	69.435		93.932
16	Total non-infrastructure additions (Enhancement)	£m	3		8.211	8.211		27.060	35.271
17	Total additions (Enhancement)	£m	3	24.497	8.211	32.707	69.435	27.060	129.203
B NIW BASE SERVICE PROVISION									
18	Water resource facilities	£m	3	1.652	0.262	1.914			1.914
19	Water treatment works	£m	3		2.677	2.677			2.677
20	Water distribution mains	£m	3	18.605	3.105	21.710			21.710
21	Service reservoirs and water towers	£m	3		4.518	4.518			4.518
22	Pumping stations	£m	3		0.862	0.862			0.862
23	Water management and general	£m	3	2.020	5.400	7.421			7.421
24	Sewerage	£m	3				6.554	0.567	7.120
25	Sea outfalls and headworks	£m	3				0.017	0.006	0.022
26	Sewage treatment works	£m	3					27.840	27.840
27	Sludge treatment works	£m	3					3.434	3.434
28	Sludge disposal	£m	3				0.000	0.000	0.000
29	In-line pumping stations	£m	3					12.496	12.496
30	Terminal pumping stations	£m	3					3.551	3.551
31	Sewerage management and general	£m	3				1.061	3.094	4.155
32	Total infrastructure renewals (Base)	£m	3	22.277		22.277	7.632		29.909
33	Total non-infrastructure expenditure (Base)	£m	3		16.825	16.825		50.986	67.811
34	Total expenditure (Base service provision)	£m	3	22.277	16.825	39.102	7.632	50.986	97.720

**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	CG	5	6	7	8	CG	9	10	11	12	CG
			Water Service					Sewerage Service					Total				
			Actual 2010-11	Actual 2011-12	Actual 2012-13	Actual 2013-14		Actual 2010-11	Actual 2011-12	Actual 2012-13	Actual 2013-14		Actual 2010-11	Actual 2011-12	Actual 2012-13	Actual 2013-14	
A DEPRECIATION CHARGE FOR THE YEAR																	
1	£m	3	41.613	50.869	80.086		B3	87.103	95.693	66.802		B3	128.716	146.562	146.888		B3
2	£m	3				0.371	B3				0.349	B3				0.720	B3
3	£m	3				0.507	B3				0.818	B3				1.325	B3
4	£m	3				0.878	B3				1.167	B3				2.045	B3
5	£m	3	41.613	50.869	80.086	47.905	B3	87.103	95.693	66.802	83.520	B3	128.716	146.562	146.888	131.425	B3
B INFRASTRUCTURE RENEWALS CHARGES, EXPENDITURE AND PROVISION																	
6	£m	3	18.844	26.803	22.593	22.391	B2	6.053	9.044	8.775	7.727	B2	24.897	35.847	31.368	30.118	B2
7	£m	3	19.017	19.454	19.902	23.935	C5	10.376	10.615	10.859	9.474	C5	29.393	30.069	30.761	33.409	C5
8	£m	3	2.094	9.443	12.134	10.590	C5	-6.657	-8.228	-10.312	-12.059	C5	-4.563	1.215	1.822	-1.469	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)

DESCRIPTION	UNITS	DP	1	2	3	4	CG	5	6	7	8	CG	9	10	11	12	CG
			Water Service					Sewerage Service					Total				
			Actual 2010-11	Actual 2011-12	Actual 2012-13	Actual 2013-14		Actual 2010-11	Actual 2011-12	Actual 2012-13	Actual 2013-14		Actual 2010-11	Actual 2011-12	Actual 2012-13	Actual 2013-14	
A DEPRECIATION CHARGE FOR THE YEAR																	
1	CCD as at 31 March of the year	£m	3	3.431	11.199	4.007		0.000	0.000	0.000			3.431	11.199	4.007		
2	CCD on additions (enhancement assets) post 1 April 2013	£m	3				0.000				0.000						0.000
3	CCD on additions (MNI assets) post 1 April 2013	£m	3				0.023				0.000						0.023
4	Total depreciation charge for the year	£m	3				0.023				0.000						0.023
5	Total depreciation charged	£m	3	3.431	11.199	4.007	4.033	0.000	0.000	0.000	0.000		3.431	11.199	4.007	4.033	
B INFRASTRUCTURE RENEWALS CHARGES, EXPENDITURE AND PROVISION																	
6	Infrastructure renewals expenditure	£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
7	Infrastructure renewals charges	£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
8	Infrastructure renewals prepayment/ (accrual)	£m	3	1.519	1.519	1.519	1.519	0.000	0.000	0.000	0.000		1.519	1.519	1.519	1.519	0.000

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	CG	
			Water Service				Sewerage Service				Total					
			Actual 2010-11	Actual 2011-12	Actual 2012-13	Actual 2013-14	Actual 2010-11	Actual 2011-12	Actual 2012-13	Actual 2013-14	Actual 2010-11	Actual 2011-12	Actual 2012-13	Actual 2013-14		
A DEPRECIATION CHARGE FOR THE YEAR																
1	CCD as at 31 March of the year	£m	3	45.044	62.068	84.093		87.103	95.693	66.802		132.147	157.761	150.895		B3
2	CCD on additions (enhancement assets) post 1 April 2013	£m	3							0.349				0.720		B3
3	CCD on additions (MNI assets) post 1 April 2013	£m	3							0.818				1.348		B3
4	Total depreciation charge for the year	£m	3							1.167				2.068		B3
5	Total depreciation charged	£m	3	45.044	62.068	84.093	51.938	87.103	95.693	66.802	83.520	132.147	157.761	150.895	135.458	B3
B INFRASTRUCTURE RENEWALS CHARGES, EXPENDITURE AND PROVISION																
6	Infrastructure renewals expenditure	£m	3	18.844	26.803	22.593	22.391	6.053	9.044	8.775	7.727	24.897	35.847	31.368	30.118	B2
7	Infrastructure renewals charges	£m	3	19.017	19.454	19.902	23.935	10.376	10.615	10.859	9.474	29.393	30.069	30.761	33.409	C5
8	Infrastructure renewals prepayment/ (accrual)	£m	3	3.613	10.962	13.653	12.109	-6.657	-8.228	-10.312	-12.059	-3.044	2.734	3.341	0.050	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%.

Columns 4 and 8 (Block A) have been populated using the actual depreciation values presented in the 2013/14 accounts. Columns 1 and 5 (Block A) have been populated using the actual depreciation values presented in the 2010/11 accounts. Columns 2 and 6 (Block A) have been populated using the actual depreciation values presented in the 2011/12 accounts. Columns 3 and 7 (Block A) have been populated using the actual depreciation values presented in the 2012/13 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.

As part of an assessment of insurance requirements an exercise was carried out during the year that identified assets on the FAR which are no longer in use. As a result of this exercise assets with a NCRC of £25,612,062.33 were decommissioned in 2013/2014 – 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 £4.033m for 2013/14 (2012/13: £4.007m). 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 (£136k) 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. If required by the Utility Regulator, and specified in the PC15 final determination, NI Water will undertake a MEA valuation during the PC15 period.

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 £25,612,062.33 were included within the current year depreciation charge.

	Water (13/14)	Sewerage (13/14)	Total (13/14)
CC Depreciation in year	£36,961,001.63	£72,794,951.41	£109,755,953.04
Accelerated Depreciation	£14,939,807.72	£10,672,254.61	£25,612,062.33
Impairment 13/14	£36,799.90	£52,955.96	£89,755.86
Total (2013/2014)	£51,937,609.25	£83,520,161.98	£135,457,771.23

	Water (12/13)	Sewerage (12/13)	Total (12/13)
CC Depreciation in year	£36,666,183.03	£55,538,725.73	£92,204,908.76
Accelerated Depreciation	£47,036,199.13	£10,728,781.64	£57,764,980.77
Impairment 12/13	£390,981.55	£534,061.39	£925,042.94
Total (2012/2013)	£84,093,363.71	£66,801,568.76	£150,894,932.47

The total depreciation charge for 13/14 (£135,458k) is £15,437k less than 12/13 (£150,895k). The difference is mainly due to fewer assets being decommissioned in 2013/14. Normal depreciation for 13/14 has increased by £17,551k. £14,116k of this increase (in Sewerage) is due to the re-classification of a number of wastewater treatment works to non-infrastructure; which had previously been incorrectly categorised to infrastructure. The depreciation which had been missed in previous years was processed in 2013/14. Normal decommissioning in the course of the business amounted to £25,612k for the year. There was also an impairment of £90k during the year which went through the depreciation line. Also, 13/14 included a full year's depreciation (£4,033k) of the Alpha PPP asset which was £26k higher than the previous year.

Infrastructure Renewals accounting

The IRC calculation for 13/14 is based on the final determination arising from PC13. The Regulator determined that the IRC and IRE will be the same for the two year period of PC13. The projected IRE forms part of the PC13 capital expenditure plans.

The difference between the actual out-turn IRE and the IRC is treated as an accrual or prepayment.

2013-2014 IRC

The IRC for 2013-14 based on PC13 can be summarised as follows:

Water	- £23.935m
Sewerage	- £ 9.474m
Total	- £33.409m

The out-turn IRE for 2013-2014 can be shown as follows:

Water	- £22.391m
Sewerage	- £7.727m
Total	- £30.118m

The prepayment /accrual at 31 March 2014 can be shown as follows:

	W TOTAL £m	S TOTAL £m	Total TOTAL £m
IRE	22.391	7.727	30.118
IRC	(23.935)	(9.474)	33.409
In year prepayment / (accrual)	(1.544)	(1.747)	(3.291)
c/f prepayment / (accrual)	13.653	(10.312)	3.341
Cumulative prepayment / (accrual)	12.109	(12.059)	0.050

At the end of the year to 31 March 2014 a prepayment balance of £0.050m was evident. This balance arose as the in-year accrual of £3.291m for 2013-14 was added to the cumulative brought forward prepayment balance of £3.341m, which existed at 31st March 2013.

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 2014 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 SBP and PC13 columns could not be populated for PPP elements as the Financial Model supporting the SBP and PC13 did not allocate IRE and IRC separately to the Alpha Project.

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)

DESCRIPTION	UNITS	DP	1	2	3	4	CG	5	6	7	8	CG	
			Water Service					Sewerage Service					
			2010-11	2011-12	2012-13	2013-14		2010-11	2011-12	2012-13	2013-14		
ACCOUNTING FIXED ASSET ADDITIONS													
NON-INFRASTRUCTURE ASSET ADDITIONS (ENHANCEMENT) BY ASSET LIFE													
A													
1	Very Short	£m	3	0.137	0.729	0.108	0.702	B3	0.194	0.836	-0.005	0.473	B3
2	Short	£m	3	0.735	0.504	2.457	3.136	B2	2.510	2.999	3.923	3.506	B2
3	Medium	£m	3	3.452	2.843	2.610	2.425	B2	15.988	12.546	10.142	9.775	B2
4	Medium long	£m	3	0.000	0.000	0.000	0.383	n/a	0.000	0.000	0.000	0.000	n/a
5	Long	£m	3	6.343	1.713	2.640	1.566	B2	21.396	12.839	14.217	13.256	B2
6	Land	£m	3	0.017	-0.018	0.000	0.000	B3	0.095	-0.129	0.102	0.050	B3
7	Land Disposals	£m	3	-0.073	-0.210	-0.285	-0.702	B2	-0.005	0.042	-0.285	-0.462	B2
8	Total	£m	3	10.611	5.562	7.530	7.509	B2	40.178	29.133	28.093	26.598	B2
NON-INFRASTRUCTURE ASSET ADDITIONS (BASE SERVICE) BY ASSET LIFE													
B													
9	Very Short	£m	3	1.196	2.229	2.119	1.948	B2	0.590	2.097	1.916	1.886	B3
10	Short	£m	3	0.502	4.182	3.285	5.839	B2	1.823	5.117	4.859	6.151	B2
11	Medium	£m	3	8.022	9.128	6.817	3.874	B2	11.299	26.744	24.145	30.514	B2
12	Medium long	£m	3	0.000	0.000	0.000	0.134	n/a	0.000	0.000	0.000	0.250	n/a
13	Long	£m	3	5.288	4.523	3.688	5.029	B2	9.346	14.049	10.338	12.185	B2
14	Total	£m	3	15.008	20.062	15.909	16.825	B2	23.058	48.006	41.258	50.986	B2
NON-INFRASTRUCTURE ADDITIONS AVERAGE LIFE (YEARS)													
C													
15	Very Short	years	0	4					4				
16	Short	years	0	10					10				
17	Medium	years	0	20					20				
18	Medium long	years	0	0					0				
19	Long	years	0	60					60				

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	CG	5	6	7	8	CG	
			Water Service					Sewerage Service					
			2010-11	2011-12	2012-13	2013-14		2010-11	2011-12	2012-13	2013-14		
ACCOUNTING FIXED ASSET ADDITIONS													
NON-INFRASTRUCTURE ASSET ADDITIONS (ENHANCEMENT) BY ASSET LIFE													
A													
1	Very Short	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.0000	n/a
2	Short	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.0000	n/a
3	Medium	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.0000	n/a
4	Medium long	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.0000	n/a
5	Long	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.0000	n/a
6	Land	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.0000	n/a
7	Land Disposals	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.0000	n/a
8	Total	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.0000	n/a
NON-INFRASTRUCTURE ASSET ADDITIONS (BASE SERVICE) BY ASSET LIFE													
B													
9	Very Short	£m	3	█	█	█	█	n/a	█	█	█	█	n/a
10	Short	£m	3	█	█	█	█	n/a	█	█	█	█	n/a
11	Medium	£m	3	█	█	█	█	B3	█	█	█	█	n/a
12	Medium long	£m	3	█	█	█	█	n/a	█	█	█	█	n/a
13	Long	£m	3	█	█	█	█	B3	█	█	█	█	n/a
14	Total	£m	3	█	█	█	█	B3	█	█	█	█	n/a
NON-INFRASTRUCTURE ADDITIONS AVERAGE LIFE (YEARS)													
C													
15	Very Short	years	0	0					n/a				
16	Short	years	0	10					n/a				
17	Medium	years	0	20					n/a				
18	Medium long	years	0	0					n/a				
19	Long	years	0	60					n/a				

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 (CAPTRAX), 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. A specific Master Class was developed and presented to Engineering Procurement, Operations and Asset Management staff in December 2009 and January 2010 to help staff understanding of CIDA definitions and allocations as well as awareness of the use of CIDA data for various business and regulatory needs including common framework and benchmarking. This training has been delivered to external consultants where requested during the 2010/11 and 2011/12 and 2012/13 years. Feedback from these sessions has been very positive. Further training will be provided in future to provide refresher training for existing staff and provide the first opportunity for new graduates within the business to have training.

The CIDA Master Class is now registered formally on the NI Water Training Calendar and is available for 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 2 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 2013/14 against each project, excluding land acquisition, with a full CIDA output.
 - CIDA lands – this reports the accrual in 2013/14 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 AIR14 reporting. The model takes the outputs from the above reports from CAPTRAX and completes the tables 32, 34, & 36, with the CWP element of Capital expenditure.

M & G

For the first time 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

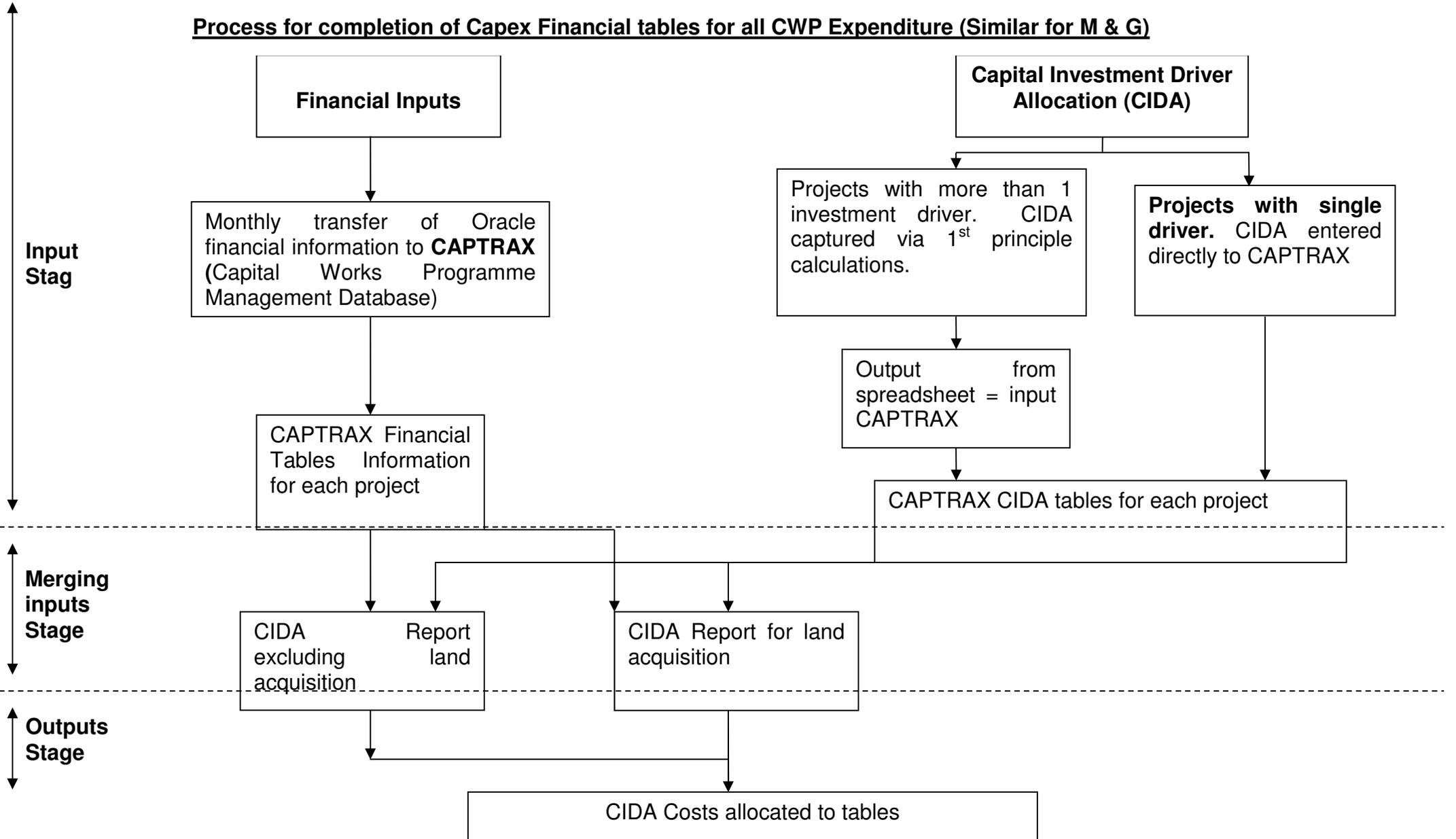
This area captures all Capital expenditure which is not managed via the CWP or included within M & G. For all Capital projects not on the CWP (herein referred to Operating Capital expenditure) the CIDA information has been captured at project level within CPMR Coptrax. This has been used in AIR14 for completion of Table 40. Unfortunately the system needs further refinement to enable reporting information for Tables 32, 34 and 36 accurately as there is significant number of contracts within each project with combinations of a number of service areas, asset types and financial categories. For reporting in AIR14 each of the contacts was verified manually to ensure accurate information was used for the population of the AIR tables in a similar way to recent years using the AICC database and ORALCE provide the data.

Table population

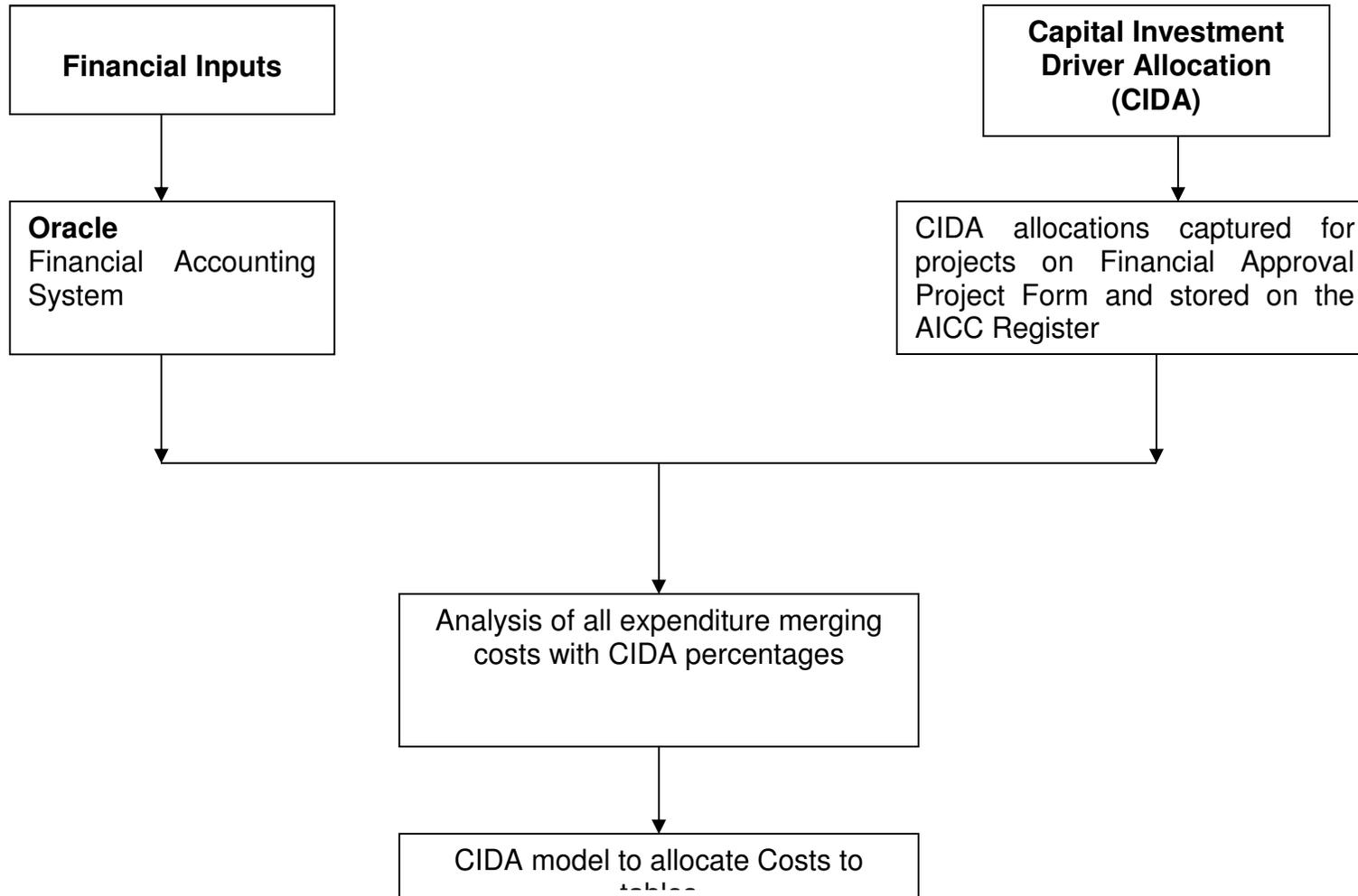
Data used in the population of the table is based on data extracted from the company's core systems and no assumptions are made in the allocation of project expenditure to the lines in the tables for all the expenditure with CIDA directly attributed. For the small rounding figure of £16k of CWP expenditure (due to CATPRAX rounding finance to the nearest £k), this 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. 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	8
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 for AIR15 will be applied to the life for Meters which will be changed to 17 years to align with PC15 Business plan assumptions.

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 is 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.

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 AIR14 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 is 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 2013/14. 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.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 35 FINANCIAL MEASURES
CAPITAL INVESTMENT - PUBLIC EXPENDITURE RECONCILIATION**

DESCRIPTION	UNITS	DP	1	2	3	4	
			REPORTING YEAR 2010-11	REPORTING YEAR 2011-12	REPORTING YEAR 2012-13	REPORTING YEAR 2013-14	
A Available PE capital budget in nominal prices							
1	Public Expenditure capital budget available	£m	3	158.605	188.442	160.244	165.800
B Capital budget statement in nominal prices							
2	Public Expenditure capital budget used	£m	3	158.605	188.440	160.211	165.540
3	Alpha PPP maintenance	£m	3				
4	Residual interest in off-balance sheet PPP	£m	3				
5	IFRS infrastructure renewal charge adjustment	£m	3	1.104	1.084	0.985	0.988
6	Further adjustments.....	£m	3	0.000	0.000	0.000	0.000
6a	£m	3	0.000	1.000	0.000	0.000
6b	£m	3	0.001	0.006	0.002	0.013
7	Capital grants and contributions	£m	3	6.888	5.618	5.757	6.586
8	Capital grants and contributions transferred to deferred credits	£m	3	-1.122	-0.647	-0.904	-0.693
9	NI Water gross capital budget	£m	3	162.219	192.044	162.258	167.566

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 adjusted for any changes agreed with the Department for Regional Development through the Public Expenditure Monitoring Rounds during the relevant year. Block B provides 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.

Section A – Available PE capital budget in nominal prices (Line 1)

The Entry in line 1 represents the final PE budget 'Total DEL Acquisitions' agreed with the Department for Regional Development, DRD, at the end of the reporting year. This is all expenditure which DRD 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 DRD have adopted IFRS as an accounting framework, the available PE will also be stated on an IFRS basis.

The table below summarises the capital DEL position at the start of the reporting year.

	2013-14
	£m
Capital additions	162.5
IFRS adjustments	-
PPP Capital Maintenance	█
PPP Residual Interest	█
	█

The capital expenditure allowance contained within the PC13 Final Determination (PC13 FD) was based on the amount of capital DEL allocated by DRD in each of the years. The capital DEL above for 2013/14 will therefore reconcile directly to the PC13 FD. The table below shows the capital expenditure allowance within the PC13 FD converted into a capital DEL allowance.

	2013/14	2014/15
	£m	£m
Capital Additions	168.0	155.9
less: capital contributions	-5.7	-5.8
less: IFRS adjustment	-1.0	-1.0
PPP Capital Maintenance	█	█
PPP Residual Interest	█	█
	█	█

In terms of movements in funding within the reporting year, the 'Capital DEL Acquisitions' was reduced by £0.5m in the October Monitoring Round to accommodate a funding deficit within DRD relating to boreholes.

	2013-14
	£m
Total DEL acquisitions at beginning of financial year	166.3
October Monitoring Round reduction re boreholes	-0.5
Total DEL acquisitions at end of financial year (reported figure)	165.8

Given the level of change to available PE capital budget available within the reporting year was minimal, we do not consider there to have been any impact on the efficient delivery of the programme or the choice of projects or categories of work delivered.

Section B - Capital budget statement in nominal prices (Lines 2-9)

Line 2 – PE capital budget used

Represents total 'Capital DEL Acquisitions' calculated as line 9 minus the sum of lines 3 – 8 inclusive.

The under-spend from the end of year 'Total DEL acquisitions' budget is calculated as £0.26m (£165.80m less £165.54m or circa 0.2% of total spend). Receipts from asset sales within the reporting year were £248k less than forecast. In order to prevent over-spend in 'Total Capital DEL – including disposals', DRD requested an equal under-spend on 'Total DEL acquisitions'. Taking this into account, the remaining overspend is £12k.

Note, the PE capital used has been agreed to our 2013/14 'provisional outturn' return submitted to DRD on the 28th April 2014. The 2013/14 'final outturn' will be provided to DRD 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 AIR14 Table 42 line 14 now represents the portion of the unitary charge allocated to capital maintenance and no longer represents actual capital maintenance. The difference between the two figures is held in the form of an accrual or prepayment within NL account 1521 – PPP deferred capital maintenance.

Details of the accounting treatment change have been summarised within the commentary for AIR14 Table 21.

Line 4 – Residual interest in off-balance sheet PPP

This represents the element of the Omega and Kinnegar PPP unitary payments which 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 which 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.

	2013/14
Kinnegar Residual Interest	██████████
Omega Residual Interest	██████████
Total	██████████

Entries to this line reconcile directly to AIR14 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).

DRD 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 PE reporting.

The table summarises expenditure currently decapitalised under IFRS.

	Total 13-14 £
IFRS Adjustment on De-capitalised Repairs	
LN067100 - Leakage Detection SE 13/14	333,000
LN068100 - Leakage Detection NW 13/14	207,996
LN070100 - Repair of Defects identified as a result of leakage detection activities	229,000
LN079100 - High Volume DMA's NW	61,934
LN079101 - High Volume DMA's SE	155,915
TOTAL	987,845

Line 6 – Further adjustments

Minor rounding differences (£13k)

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 the sum of AIR14 Table 37 line 17.

Line 8 – Capital grants and contributions transferred to deferred credits

As 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.

To do this a portion of the contribution (currently assumed as 30% of infrastructure charges) is transferred to and held in a deferred capital contribution account and released to the P&L over a 20 year period. The 20 year period represents the average useful life of non-infrastructure assets.

Entries to this line are consistent with AIR14 Table 37 line 18.

Line 9 – NI Water gross capital expenditure

Represents gross capital expenditure as per AIR14 Table 36 line 13.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 36 FINANCIAL MEASURES
CAPITAL INVESTMENT - GROSS CAPITAL INVESTMENT SUMMARY**

DESCRIPTION	UNITS	DP	1	2	3	4		
			REPORTING YEAR 2010-11	REPORTING YEAR 2011-12	REPORTING YEAR 2012-13	REPORTING YEAR 2013-14	CG	
A Water service								
1	Non-infrastructure maintenance (gross of grants and contributions)	£m	3	15.008	20.062	15.909	16.825	B3
2	Infrastructure renewals expenditure (gross)	£m	3	18.886	26.803	22.593	22.391	B3
3	Capital expenditure - quality enhancement programme	£m	3	10.775	12.278	9.972	14.396	B3
4	Capital expenditure - customer service	£m	3	4.101	5.759	3.126	3.262	B3
5	Capital expenditure - supply demand balance	£m	3	25.182	19.197	17.782	15.049	B3
5a	Capex - new development	£m	3	14.517	10.163	8.323	4.777	B3
5b	Capex - growth	£m	3	0.417	0.317	0.244	0.309	B3
5c	Capex - security of supply	£m	3	10.248	8.717	9.214	9.842	B3
5d	Capex - free meters	£m	3	0.000	0.000	0.000	0.121	B3
6	Gross capital expenditure - water service	£m	3	73.952	84.099	69.382	71.923	B3
B Sewerage Service								
7	Non-infrastructure maintenance (gross of grants and contributions)	£m	3	23.058	48.006	41.258	50.986	B3
8	Infrastructure renewals expenditure (gross)	£m	3	6.342	9.044	8.775	7.727	B3
9	Capital expenditure - quality enhancement programme	£m	3	29.753	28.730	21.626	21.238	B3
10	Capital expenditure - customer service	£m	3	6.876	4.251	2.899	3.955	B3
11	Capital expenditure - supply demand balance	£m	3	22.238	17.914	18.318	11.736	B3
11a	Capex - new development	£m	3	22.078	16.950	17.871	11.579	B3
11b	Capex - sewage treatment	£m	3	0.160	0.963	0.447	0.158	B3
12	Gross capital expenditure - sewerage service	£m	3	88.267	107.945	92.876	95.643	B3
C Gross capital expenditure total								
13	Gross capital expenditure total	£m	3	162.219	192.044	162.258	167.566	B3
D Adopted assets, nil cost assets								
14	Water service assets adopted at nil cost	£m	3	0.000	0.000	0.000	0.000	B3
15	Water service assets adopted in return for an payment	£m	3	0.000	0.000	0.000	0.000	B3
16	Sewerage service asset adopted at nil cost	£m	3	46.237	48.034	48.233	59.566	B3
17	Sewerage service assets adopted in return for a payment.	£m	3	0.000	0.000	0.000	0.000	B3
18	Total adopted assets and nil cost assets	£m	3	46.237	48.034	48.233	59.566	B3
E Infrastructure renewals expenditure (net)								
19	Water service infrastructure renewals expenditure (net) (NIW only)	£m	3	18.810	26.771	22.514	22.277	B3
20	Sewerage service infrastructure renewals expenditure (net) (NIW only)	£m	3	6.342	9.044	8.609	7.632	B3
21	Total infrastructure renewals expenditure (net) (NIW only)	£m	3	25.152	35.815	31.123	29.909	B3
F Total asset additions								
22	Water service total asset additions	£m	3	55.065	57.296	46.788	49.532	B3
23	Sewerage service total asset additions	£m	3	128.162	146.936	132.334	147.482	B3
24	Total asset additions	£m	3	183.227	204.232	179.122	197.014	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
			PC13 OUTTURN (£M)			PC13 FINAL DETERMINATION (£M)			PC13 VARIANCE FROM FD (£M)			PC13 VARIANCE FROM FD (%)		
			REPORTING YEAR 2013-14	REPORTING YEAR 2014-15	TOTAL TO DATE PC13	REPORTING YEAR 2013-14	REPORTING YEAR 2014-15	TOTAL TO DATE PC13	REPORTING YEAR 2013-14	REPORTING YEAR 2014-15	TOTAL TO DATE PC13	REPORTING YEAR 2013-14	REPORTING YEAR 2014-15	TOTAL TO DATE PC13
A Water service														
1	Non-infrastructure maintenance (gross of grants and contributions)	£m	3	16.825			18.251			-1.427			-7.80%	
2	Infrastructure renewals expenditure (gross)	£m	3	22.391			24.416			-2.024			-8.30%	
3	Capital expenditure - quality enhancement programme	£m	3	14.396			13.665			0.731			5.30%	
4	Capital expenditure - customer service	£m	3	3.262			3.275			-0.013			-0.40%	
5	Capital expenditure - supply demand balance	£m	3	15.049			20.026			-4.977			-24.90%	
6	Gross capital expenditure - water service	£m	3	71.923			79.633			-7.710			-9.70%	
B Sewerage Service														
7	Non-infrastructure maintenance (gross of grants and contributions)	£m	3	50.986			32.612			18.374			56.30%	
8	Infrastructure renewals expenditure (gross)	£m	3	7.727			9.647			-1.920			-19.90%	
9	Capital expenditure - quality enhancement programme	£m	3	21.238			26.551			-5.313			-20.00%	
10	Capital expenditure - customer service	£m	3	3.955			6.553			-2.598			-39.60%	
11	Capital expenditure - supply demand balance	£m	3	11.736			16.371			-4.635			-28.30%	
12	Gross capital expenditure - sewerage service	£m	3	95.643			91.734			3.909			4.30%	
C Gross capital expenditure total														
13	Gross capital expenditure total	£m	3	167.566			171.367			-3.801			-2.20%	
D CAPITAL CONTRIBUTIONS NET OF DEFERRED CREDITS														
14	Capital contributions for new connections	£m	3	5.684			3.938			1.746			44.30%	
15	Other capital contributions	£m	3	0.209			0.000			0.209			0.00%	
16	Total capital contributions net of deferred credits	£m	3	5.893			3.938			1.955			49.60%	
E TOTAL CAPITAL EXPENDITURE (NET)														
17	Total capital expenditure (net)	£m	3	161.673			167.429			-5.756			-3.40%	

Table 36a – Capital Investment - Capital Grants and Contributions

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 REPORTING YEAR 2010-11	2 REPORTING YEAR 2011-12	3 REPORTING YEAR 2012-13	4 REPORTING YEAR 2013-14
A Water Service - Maintenance grants and contributions							
1	MNI - grants and contributions.	£m	3	0.000	0.000	0.000	0.000
2	Infrastructure renewals grants and contributions.	£m	3	0.076	0.032	0.079	0.114
3	Total maintenance grants and contributions	£m	3	0.076	0.032	0.079	0.114
B Water Service - Enhancement grants and contributions							
4	Infrastructure charge receipts - new connections	£m	3	1.419	1.153	1.127	1.272
5	Enhancement requisitions, grants and contributions	£m	3	2.211	1.840	2.031	2.054
6.1	<i>Other categories of capital grants and contributions to be added by NI Water</i>	£m	3	0.000	0.000	0.000	0.000
7	Total enhancement capital grants and contributions	£m	3	3.630	2.993	3.158	3.326
C Water Service - Deferred credits							
8	Capital grants and contributions transferred to deferred credits	£m	3	0.619	0.364	0.500	0.382
D Sewerage Service - Maintenance grants and contributions							
9	MNI - grants and contributions.	£m	3	0.000	0.000	0.000	0.000
10	Infrastructure renewals grants and contributions.	£m	3	0.000	0.000	0.166	0.095
11	Total maintenance grants and contributions	£m	3	0.000	0.000	0.166	0.095
E Sewerage Service - Enhancement grants and contributions							
12	Infrastructure charge receipts - new connections	£m	3	1.153	0.897	0.911	1.036
13	Enhancement requisitions, grants and contributions	£m	3	2.029	1.696	1.443	2.015
14.1	<i>Other categories of capital grants and contributions to be added by NI Water</i>	£m	3	0.000	0.000	0.000	0.000
15	Total enhancement capital grants and contributions	£m	3	3.182	2.593	2.354	3.051
F Sewerage Service - Deferred credits							
16	Capital grants and contributions transferred to deferred credits	£m	3	0.503	0.283	0.404	0.311
G Totals for the Water and Sewerage Services							
17	Total enhancement capital grants and contributions	£m	3	6.888	5.618	5.757	6.586
18	Total capital grants and contributions transferred to deferred credits	£m	3	1.122	0.647	0.904	0.693

Table 37 – Capital Investment - Capital Grants and Contributions**Line 2 – Water service maintenance grants and contributions**

This line shows £0.114m and represents contributions from developers towards the cost of watermains diversions.

Line 4 – Water service infrastructure charge receipts - new connections

This line shows £1.272m 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	£ 1.945m
Water requisitions	£ 0.109m
Total Line 5	£ 2.054m

Line 6 – Water service other categories of capital grants and contributions

Nil for 2013-14.

Line 8 – Water service deferred credits

This line shows £0.382m and represents 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 £1.272m x 30% = £0.382m

The 30% used in this calculation is based on an estimate of the future capital expenditure that relates to growth.

Line 10 – Sewerage service - maintenance grants and contributions

This line shows £0.095m and represents contributions from developers towards the cost of realignment of sewers.

Line 12 – Sewerage service - Infrastructure charge receipts - new connections

This line shows £1.036m 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	£0.685m
Sewerage requisitions	£0.672m
Sewers for adoption –application fees	£0.658m
Total Line 13	£2.015m

Line 14 – Sewerage service - other categories of capital grants and contributions

Nil for 2013-14.

Line 16 – Sewerage service deferred credits

This line shows £0.311m 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 £1.036m x 30% = £0.311m

The 30% used in this calculation is based on an estimate of the future capital expenditure that relates to growth.

Comparison of 2013-14 to PC13

The following table shows a comparison of the actual contributions for 2013-14 compared to PC13.

	2013-14	2013-14	2013-14	2013-14
	Actual	PC13	Variance	Variance
	£m	£m	£m	£m
Water				
Infrastructure – base	0.114	-	0.114	N/A*
Infrastructure charges - gross	1.272	1.648	(0.376)	(23%)
Connections	1.945	2.567	(0.622)	(24%)
Requisitions	0.109	0.138	(0.029)	(21%)
Total	3.440	4.353	(0.913)	(21%)
<i>Included in the gross</i> Infrastructure charges above the non infrastructure element - 30%	0.382	0.495	(0.113)	(23%)
Sewerage				
Infrastructure – base	0.095	-	0.095	N/A*
Infrastructure charges – gross	1.036	1.368	(0.332)	(24%)
Connections	0.685	0.480	0.205	43%
Requisitions	0.672	0.138	0.534	387%
Sewers for adoption	0.658	0.205	0.453	221%
Total	3.146	2.191	0.955	44%
<i>Included in the gross</i> Infrastructure charges above the non infrastructure element - 30%	0.311	0.410	(0.099)	(24%)
Total contributions	6.586	6.544	0.042	1%
<i>Which includes: non-infrastructure contributions</i>	0.693	0.905	(0.212)	(23%)

* no base infrastructure contributions were assumed in PC13.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 38 FINANCIAL MEASURES
CAPITAL INVESTMENT - ADDITIONAL OPEX FROM CAPEX**

DESCRIPTION		UNITS	DP	1	2	3	4
				REPORTING YEAR 2010-11	REPORTING YEAR 2011-12	REPORTING YEAR 2012-13	REPORTING YEAR 2013-14
A	OPEX from CAPEX						
1	Additional OPEX arising from Water Service projects	£m	3				0.215
2	Additional OPEX arising from Sewerage Service projects	£m	3				1.483
3	Total additional OPEX	£m	3				1.698

Table 38 - Capital investment - additional opex from capex

A list of sites with CAR ID's is obtained and the Opex costs for 2013/14 are calculated for these sites through various reports.

The Opex from Capex costs have been calculated by taking the difference between the total 2012/13 costs and the 2013/14 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 £0.215M.

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 £1.483M.

Line 3 - Total additional OPEX

The total figure is £1.698M.

Project ID	Project Name	Priority	Phase	Start Date	End Date	Est. Cost	Actual Cost	Completion %	Notes
545-2013-14-04K475	Lone Moor Road, Londonderry Storm Sewer Extension	01	NEA	04/07/2011	06/07/2011	0.000	0.000	0.000	0.000
545-2013-14-04K476	Circle Road, Londonderry Storm Sewer Extension	01	NEA	06/07/2011	06/07/2011	0.000	0.000	0.000	0.000
547-2013-14-04K480	Faughan Crescent WWTPS, Londonderry Pumping Station and Pumping main upgrade	01	NEA	12/02/2012	02/02/2013	0.000	0.000	0.000	0.000
548-2013-14-04K482	Cherry Hill Water Treatment Works, Londonderry Pumping Station and Pumping main upgrade	01	NEA	12/02/2012	02/02/2013	0.000	0.000	0.000	0.000
549-2013-14-04K482	Tamnahoney WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
551-2013-14-04K486	Bonnabrogh WWTP Upgrade	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
552-2013-14-04K487	Nemes Corner, Londonderry WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
553-2013-14-04K488	Agnesway WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
554-2013-14-04K489	Ballykilly WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
555-2013-14-04K490	Strathgully Sewerage Siphons Upgrade	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
556-2013-14-04K494	60/62 Man St, Cleary Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
558-2013-14-04K498	Foran Road, Donaghadee, Dungannon Sewer Extension	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
560-2013-14-04K500	Bennetts Road, Derry, Four Pumping Main Extensions	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
561-2013-14-04K500	Derrafall Combined Sewer Network Investigation	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
562-2013-14-04K502	Metroland Bridge WWTP - Pumping Main Upgrade	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
563-2013-14-04K504	Londonderry DAP - Burnara Road Work Package, Stage 2	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
564-2013-14-04K506	Art St, Dungannon, Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
565-2013-14-04K508	Dromywater WWTP Phase 2 Base Maintenance	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
566-2013-14-04K508	Curlew WWTP Phase 2 Base Maintenance	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
567-2013-14-04K509	Longfield (Eglington) WWTP Phase 2 Base Maintenance	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
568-2013-14-04K511	Foyls Street, Londonderry Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
569-2013-14-04K513	Row Hill Road, Gorteen, Limavady Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
570-2013-14-04K514	Choney Park West, Limavady Storm Sewer Ext	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
571-2013-14-04K515	Derrafall WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
572-2013-14-04K517	Fort George Science Park, Derry Foul Sewer Ext	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
573-2013-14-04K519	Castell Gardens, Derry Storm Sewer Extension	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
574-2013-14-04K519	Castlederg, Derry Storm Sewer Extension	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
575-2013-14-04K520	Dromywater, Derry Storm Sewer Extension	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
576-2013-14-04K520	Scilla's Entry Car Park Sewer Replacement	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
577-2013-14-04K520	Broomfield Road, Hunters Green Sewer Replacement	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
578-2013-14-04K520	BALVAUGHAN WWTPs	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
580-2013-14-04K520	Donaghadee WWTP Upgrade	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
581-2013-14-04K520	Sion Mills Foul Sewer Extension	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
583-2013-14-04K527	Omagh WWTP - Nature Restoration	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
584-2013-14-04K528	Castlederg WWTP Upgrade Including Redundant of Pumping Main	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
585-2013-14-04K529	Metroland, Derry, Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
586-2013-14-04K531	Stranishore WWTPs Refurbishment	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
587-2013-14-04K531	Stranishore WWTP Upgrade	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
588-2013-14-04K531	Eggaragh WWPS Upgrade	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
589-2013-14-04K531	Curlew WWTP Upgrade	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
590-2013-14-04K531	Castlederg WWPS Upgrade	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
591-2013-14-04K531	Dromywater, Derry, Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
592-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
593-2013-14-04K531	Greenbridge WWTP Upgrade	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
594-2013-14-04K531	Derry Road, Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
595-2013-14-04K531	Writers Lane, Coo, Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
596-2013-14-04K531	Lough Mahon WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
597-2013-14-04K531	Greenacree (Lyons) WWTPs Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
598-2013-14-04K531	Bridge Street, Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
599-2013-14-04K531	Lemnau Park, Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
600-2013-14-04K531	Glennan Road, Storm Sewer Extension	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
601-2013-14-04K531	Quinn Road, Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
602-2013-14-04K531	Mountfield WWTPs Appraisal Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
603-2013-14-04K531	Castlederg WWTPs Appraisal Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
604-2013-14-04K531	Victoria Bridge WWTPs Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
605-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
606-2013-14-04K531	Brassy WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
607-2013-14-04K531	Lamnah Road, Storm Sewer Extension	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
608-2013-14-04K531	Brassy WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
609-2013-14-04K531	Mahon Rd, Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
610-2013-14-04K531	Woolfield, Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
611-2013-14-04K531	Convent Close, Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
612-2013-14-04K531	Castlederg WWTP Upgrade	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
613-2013-14-04K531	Farmgate WWTP	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
614-2013-14-04K531	Garrison WWTP	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
615-2013-14-04K531	Shes, Army Reserve Storm Pipe	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
616-2013-14-04K531	Metroland, Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
617-2013-14-04K531	Enniskillen Road, Storm Sewer Extension	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
618-2013-14-04K531	Lamnah Road, Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
619-2013-14-04K531	Cherry Hill, Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
620-2013-14-04K531	Cherry Hill, Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
621-2013-14-04K531	Cherry Hill, Storm Sewer	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
622-2013-14-04K531	Temp WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
623-2013-14-04K531	Belmont WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
624-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
625-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
626-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
627-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
628-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
629-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
630-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
631-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
632-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
633-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
634-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
635-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
636-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
637-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000	0.000	0.000	0.000
638-2013-14-04K531	Castlederg WWTP Feasibility Study	01	NEA	07/06/2011	10/06/2011	0.000			

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). This is a refinement on the process adopted in AIR 13 which the whole capital programme was examined as one element.

- 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 – Water Service – Check to Table 25 line 5 col 4. For AIR 14 the reported numbers in these two tables are as follows:
Table 25 – £51.361m
Table 36 - £49.532m

The difference in the above 2 figures is explained as follows:

- a) PPP Alpha capital maintenance of £[REDACTED] is not included in Table 36
 - b) £-14k included in Table 25 relates to Decapitalised projects in 12/13.
 - c) Adjustment of £360k for expenditure on Silent Valley visitors centre not treated as an addition in 2012-13 and not included in Table 36.
- Total asset additions – Sewerage Service – Check to Table 25 line 5 col 8. For AIR 14 the reported numbers in these two tables are as follows:
Table 25 – £150.794m
Table 36 - £147.482m

The difference in the above 2 figures is explained as follows:

- d) PPP Omega ([REDACTED]) and PPP Kinnegar ([REDACTED]) residual asset additions not included in Table 36.
- e) £-73k included in Table 25 relates to Decapitalised projects in 12/13.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 40A
Nominated outputs delivered by PC13 Capital Projects and Programmes of Work

A					B								
Project Information					Project Outputs								
Project ID Reference	Project Name	PC13 Programme	Quality Regulator Date	BU Date (if appropriate)	PC13 Output Ref Code	Output Units	PC10			PC13		PC15	
PI_Project_ID	PI_Project_Name	PI_PC13_Prog	(if appropriate)	(if appropriate)			2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Water Treatment Base Maintenance												
JA271	Killylane WTW	1		31/12/2014	7	nr					1		
	Water Treatment Works												
JN390	Lough Bradan WTWs Upgrade	4		02/03/2011	7	nr	1						
JL723	Carmony Water Treatment Works Upgrade	4		30/03/2011	7	nr	1						
JP669	Killyhevin WTW - Enforcement Order	4		30/09/2014	7	nr					1		
JR463	Dorisland WTW GAC plant	4		31/03/2015	7	nr					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		
JG035	Ballydougan to Newry TM - Phase 2B	5		30/12/2014	6	nr					1		
JR342	Castor Bay to Belfast TM	5		31/12/2014	6	nr					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		01/01/2015	8	nr					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			
JI025	MIMP South (Major Incident Mitigation Project West Region) Freeze Thaw Improvements	8		24/01/2014	15	nr				1			
JI027	MIMP Central (Major Incident Mitigation Project Central Region) Freeze Thaw Improvements	8		28/03/2014	15	nr				1			
JI028	MIMP East (Major Incident Mitigation Project East Region) Freeze Thaw Improvements	8		30/03/2015	15	nr					1		
JI026	MIMP North (Major Incident Mitigation Project North Region) Freeze Thaw Improvements	8		30/03/2015	15	nr					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				

A					B								
Project Information					Project Outputs								
Project ID Reference	Project Name	PC13 Programme	Quality Regulator Date (if appropriate)	BU Date (if appropriate)	PC13 Output Ref Code	Output Units	PC10			PC13		PC15	
PI_Project_ID	PI_Project_Name	PI_PC13_Prog	(if appropriate)	(if appropriate)	Ref Code		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13	14
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, Bunrana 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				5			
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			
KN595	Brookmount Road, Hunters Crescent, 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				
KN646	Winters Lane, CSO Upgrade - UID	12		27/03/2013	12	nr			1				
KT415	Glenmore WwPS Lisburn CSO upgrade	12		25/06/2013	12	nr							
KT415	UID065 Glenmore SPS CSO 22	12		25/06/2013	12	nr				1			
KS939	Central Promenade, Newcastle CSO Upgrade (Pattons Bridge)	12		31/03/2015	12	nr							
KS939	UID 259 Pattons Bridge (Blackrock WwPS	12		31/03/2015	12	nr					1		
KV154	Newry Road SPS Warrenpoint - UID's	12		14/01/2014	12	nr							
KV154	UID095 Newry Road TPS CSO	12		14/01/2014	12	nr				1			
KV154	UID234 Drumsesk Road Header Tank CSO	12		14/01/2014	12	nr				1			
KS372	Market Street SPS Upgrade, Downpatrick - UID's	12		28/02/2014	12	nr							
KS372	UID044 Market Street SPS Upgrade, Downpatrick - UID's	12		28/02/2014	12	nr					1		
KF037	Annagher Sewage Pumping Station and Rising Main - UID's	12		28/03/2014	12	nr							
KF037	UID245 Annagher SPS	12		28/03/2014	12	nr				1			
KF037	UID246 Campbells Garage WwPS CSO	12		28/03/2014	12	nr				1			
KF037	UID247 Washing bay Road WwPS CSO	12		28/03/2014	12	nr				1			
KF037	UID359 Canal Quay WWPS	12		28/03/2014	12	nr				1			
KV161	Castlewellan DAP Stage 1 - UIDs	12		31/03/2014	12	nr							
KV161	UID033 Mill Hill CSO 04	12		31/03/2014	12	nr				1			
KV161	UID031 Ballylough CSO 04	12		31/03/2014	12	nr				1			
KV161	UID036 Annesborough Park CSO 01	12		31/03/2014	12	nr				1			
KS937	Annesborough Park WWPS Upgrade	12		31/03/2015	12	nr							
KS937	UID032 Annesborough Park WwPS	12		31/03/2015	12	nr					1		
KT403	Drumbeg Drive, Lisburn WWPS Enhancement	12		30/09/2014	12	nr							
KT403	Maralin Ave CSO 02	12		30/09/2014	12	nr					1		
KS875	Bangor DAP Works Package 6: Lukes Point WWPS UIDs	12		30/09/2014	12	nr							
KS875	UID189 Bangor DAP Works Package 6: Lukes Point WWPS UIDs	12		30/09/2014	12	nr					1		
KT391	Lisburn DAP Stage 1 - UID's	12		01/01/2015	12	nr							
KT391	UID066 Waterside 2 CSO 07	12		01/01/2015	12	nr					1		
KT391	UID067 B Hilden PS CSO 13B	12		01/01/2015	12	nr					1		

A					B								
Project Information					Project Outputs								
Project ID Reference	Project Name	PC13 Programme	Quality Regulator Date (if appropriate)	BU Date (if appropriate)	PC13 Output Ref Code	Output Units	PC10			PC13		PC15	
PI_Project_ID	PI_Project_Name	PI_PC13_Prog					2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13	14
KT391	UID068 Hilden PS CSO 13A	12		01/01/2015	12	nr					1		
KT391	UID069 Antrim St CSO 25	12		01/01/2015	12	nr					1		
KT391	UID072 New Holland WWT	12		01/01/2015	12	nr					1		
KT391	UID073 Duncans Rd CSO 15	12		01/01/2015	12	nr					x		
KT391	UID074 Laws Yard CSO 14	12		01/01/2015	12	nr					1		
KT391	UID221 Waterside 1 CSO 01	12		01/01/2015	12	nr					1		
KT391	UID222 Linenhall Street CSO 03	12		01/01/2015	12	nr					1		
KT391	UID223 Antrim Street CSO 05	12		01/01/2015	12	nr					1		
KT391	UID224 Clonevin Park CSO 10	12		01/01/2015	12	nr					1		
KT391	UID225 Sprucefield WWPS Screen CSO 20	12		01/01/2015	12	nr					1		
KT391	UID226 Antrim Road CSO 24 + flooding	12		01/01/2015	12	nr					1		
KT391	UID227 Bow Street CSO 26	12		01/01/2015	12	nr					1		
KT391	UID228 Ballynahinch Rd 2 CSO 27	12		01/01/2015	12	nr					1		
KT391	UID229 Grand Street Screen CSO 28	12		01/01/2015	12	nr					1		
KS873	Bangor DAP Work Package 2: Rathmore Stream UIDs	12		01/01/2015	12	nr							
KS873	UID013 Westburn Cresc. CSO 3A	12		01/01/2015	12	nr					1		
KS873	UID014 Crawfordsburn Rd CSO 03B	12		01/01/2015	12	nr					1		
KS873	UID015 Crawfordsburn Rd CSO 03C	12		01/01/2015	12	nr					1		
KR480	Hollywood Sewer Catchment Investigations - UIDs	12		01/01/2015	12	nr							
KR480	UID218 Palace Barracks CSO 110	12		01/01/2015	12	nr					1		
KR480	UID219 Jackson Road CSO 52	12		01/01/2015	12	nr					1		
KR480	UID220 Strathearn Court CSO 53	12		01/01/2015	12	nr					1		
KR439	Millisle DAP Stage 2 - UIDs	12		01/01/2015	12	nr							
KR439	UID076 Millisle DAP Stage 2 - UIDs	12		01/01/2015	12	nr					1		
KR417	Ormeau Avenue Sewer investigation and feasibility study for pollution resolution - UID's	12		01/01/2015	12	nr							
KR417	UID191 Cromac Street CSO 95	12		01/01/2015	12	nr					1		
KR417	UID192 Outside Holiday Inn CSO97	12		01/01/2015	12	nr					1		
KR417	UID193 Dublin Road Cinema CSO 96	12		01/01/2015	12	nr					1		
KR417	UID194 Bankmore Street / Dublin Road CSO 81	12		01/01/2015	12	nr					1		
KR417	UID265 Sandy Row CSO 94	12		01/01/2015	12	nr					1		
KG183	Portadown Drainage Area Network Improvements - Meadow Lane and Bann Street - UID's	12		01/01/2015	12	nr							
KG183	UID081 Meadow Lane CSO 06	12		01/01/2015	12	nr					1		
KG183	UID082 Meadow Lane CSO 07	12		01/01/2015	12	nr					1		
KG183	UID083 Portmore Street CSO 08	12		01/01/2015	12	nr					1		
KG183	UID085 Clonavon Avenue CSO 11	12		01/01/2015	12	nr					1		
KG183	UID233 Meadow Lane WWPS CSO 32	12		01/01/2015	12	nr					1		
KG183	UID086 Meadow Lane CSO 12	12		01/01/2015	12	nr					1		
KF330	Armagh DAP Stage 1 - UID's	12		01/01/2015	12	nr							
KF330	UID001 Scotch Street CSO. 2	12		01/01/2015	12	nr					1		
KF330	UID002 Scotch Street. CSO 1	12		01/01/2015	12	nr					1		
KF330	UID003 Courthouse 1 CSO	12		01/01/2015	12	nr					1		
KF330	UID005 The Mall East CSO	12		01/01/2015	12	nr					1		
KF330	UID006 English St CSO. Scheme 2	12		01/01/2015	12	nr					1		
KF330	UID007 Drumcairn SPS. Scheme 3	12		01/01/2015	12	nr					1		
KF330	UID008 Milford SPS	12		01/01/2015	12	nr					1		
KF330	UID009 Killylea SPS	12		01/01/2015	12	nr					1		
KF330	UID010 Newry Road SPS	12		01/01/2015	12	nr					1		
KF330	UID173 Mall West CSO	12		01/01/2015	12	nr					1		
KF330	UID175 Alexender Road CSO	12		01/01/2015	12	nr					1		
KF330	UID176 Gillis Lane CSO	12		01/01/2015	12	nr					1		
KS879	Bangor DAP Work Package 4: Bangor Marina UIDs	12		19/01/2015	12	nr							
KS879	UID018 Somerset Ave. CSO 11	12		19/01/2015	12	nr					1		

A					B								
Project Information					Project Outputs								
Project ID Reference	Project Name	PC13 Programme	Quality Regulator Date (if appropriate)	BU Date (if appropriate)	PC13 Output Ref Code	Output Units	PC10			PC13		PC15	
PI_Project_ID	PI_Project_Name	PI_PC13_Prog					2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13	14
KS879	UID019 Bridge St CSO 13	12		19/01/2015	12	nr					1		
KS879	UID020 Quay St CSO 14	12		19/01/2015	12	nr					1		
KS879	UID021 Tennyson CSO 10	12		19/01/2015	12	nr					1		
KS879	UID022 Queens parade CSO 12	12		19/01/2015	12	nr					1		
KS877	Bangor DAP Works Package 5 - Clandeboye Stream UIDs	12		19/01/2015	12	nr							
KS877	UID023 Castle Park CSO 07	12		19/01/2015	12	nr					1		
KS877	UID179 13 Rugby Avenue CSO 8A	12		19/01/2015	12	nr					1		
KS877	UID180 11 Brunswick Road CSO 8B	12		19/01/2015	12	nr					1		
KS877	UID181 104 Abbey Street CSO 8F	12		19/01/2015	12	nr					1		
KS877	UID182 114 Abbey Street CSO 8E	12		19/01/2015	12	nr					1		
KS877	UID183 Railway View Street CSO 8G	12		19/01/2015	12	nr					1		
KS877	UID184 Abbey Park CSO 9	12		19/01/2015	12	nr					1		
KS877	UID185 Avonlea Park CSO 6	12		19/01/2015	12	nr					1		
KS877	UID186 Rosemary Crescent / Inglewood Pk CSO 5	12		19/01/2015	12	nr					1		
KS877	UID187 Clandeboye Road CSO 5B	12		19/01/2015	12	nr					1		
KS877	UID263 57 Belfast Road CSO 8C	12		19/01/2015	12	nr					1		
KS877	UID 264 17 Belfast CSO 8D	12		19/01/2015	12	nr					1		
KS902	Dundrum DAP, UID Upgrades - UID's	12		19/01/2015	12	nr							
KS902	UID237 Parochial House CSO 02	12		19/01/2015	12	nr					1		
KS902	UID238 Main Street CSO 04	12		19/01/2015	12	nr					1		
KS902	UID239 Flynn's WWPS CSO 05	12		19/01/2015	12	nr					1		
KT114	Hillsborough WWTW	16		18/03/2014	12	nr							
KT114	UID071 Magherageery PS CSO 18	16		18/03/2014	12	nr				1			
KS848	Newcastle WwTW	16		09/12/2013	12	nr							
KS848	UID 260 Harbour WwPS	16		09/12/2013	12	nr				1			
KR501	Carrickfergus WWTW Upgrade	2		31/03/2015	12	nr							
KR501	UID272 Carrickfergus CSO	2		31/03/2015	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						

A					B								
Project Information					Project Outputs								
Project ID Reference	Project Name	PC13 Programme	Quality Regulator Date (if appropriate)	BU Date (if appropriate)	PC13 Output Ref Code	Output Units	PC10			PC13		PC15	
PI_Project_ID	PI_Project_Name	PI_PC13_Prog					2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13	14
KN533	Rousky Sewerage Scheme	15		09/09/2010	13	nr	1						
KB278	Moneyreagh 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		15/01/2015	13	nr					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	Ardrum 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			
KT114	Hillsborough WWTW	16		18/03/2014	13	nr				1			
KS848	Newcastle WwTW	16		09/12/2013	13	nr				1			
KR501	Carrickfergus WWTW Upgrade	2		31/03/2014	13	nr				1			
KR530	Belfast WwTW Base Maintenance Phase 2	2		18/03/2014	13	nr				1			
KN631	Strabane WWTW's Refurbishment	2		20/12/2013	13	nr				1			
KL350	Benone Area Sewerage	16		16/09/2013	13	nr							
KL350	Decommission Benone WwTW & construct WwPS	16		16/09/2013	13	nr				1			
KL350	Decommission Drumavelly WwTW & construct WwPS	16		16/09/2013	13	nr				1			
KL350	Decommission Aughil WwTW & construct WwPS	16		16/09/2013	13	nr				1			
KL350	Decommission MoD WwTW & construct WwPS	16		16/09/2013	13	nr				1			
KL350	Decommission NIPS WwTW & construct WwPS	16		16/09/2013	13	nr				1			
KL350	Provision of new Magilligan WwTW	16		16/09/2013	13	nr				1			
KP672	Tempo WwTW	16		01/09/2013	13	nr					1		
KS844	Ballyhorman Outfall - NIEA Enforcement	16		31/12/2013	13	nr				1			
KL424	Magheramason Wwtw	16		20/03/2015	13	nr					1		
KR409	Moneyreagh WwTW (Storm Pumping station)	16		12/12/2013	13	nr				1			
KP586	Clabby Wwtw	16		30/09/2014	13	nr					1		
KN599	Donaghmore Wwtw	16		30/09/2014	13	nr					1		
KL487	Nixon's Corner	16		30/09/2014	13	nr					1		
KL386	Gortnahey Wwtw	16		30/09/2014	13	nr					1		
KS389	Ballymartin & Blackrock WwTWs	16		31/03/2014	13	nr					1		
KS355	Ballynahinch Wwtw	16		21/03/2014	13	nr				1			
KS905	Kilmore WwTW	16		20/12/2013	13	nr					1		
KS887	Ards South (Ballycranbeg WwTW load reduction)	16		31/12/2013	13	nr					1		
KL496	Feeny WwTW - Replacement Secondary Treatment	16		08/08/2014	13	nr					1		
KF346	Robinsonstown WwTW	16		01/01/2015	13	nr					1		
KN596	Ballymagory WWTW	16		19/01/2015	13	nr					1		
KL493	Artigarvin WwTW	16		19/01/2015	13	nr					1		
KN640	Dromore (Tyrone) WWTW	16		19/01/2015	13	nr					1		

A					B								
Project Information					Project Outputs								
Project ID Reference	Project Name	PC13 Programme	Quality Regulator Date (if appropriate)	BU Date (if appropriate)	PC13 Output Ref Code	Output Units	PC10			PC13		PC15	
PI_Project_ID	PI_Project_Name	PI_PC13_Prog					2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13	14
KT402	Dunmurry WWTW Sludge Facility	16		18/03/2014	13	nr				1			
KB459	Maghera WwTW: Phase 2	16		04/02/2014	13	nr				1			
KL394	Drumsum Wwtw	16		28/02/2015	13	nr					1		
KP668	Lisnarrick Wwtw	16		28/02/2015	13	nr					1		
KT126	Stoneyford Wwtw	16		28/03/2015	13	nr					1		
KI508	UWWTR MCERT compliance	16		28/03/2015	13	nr					1		
KC296	Ballycastle Wwtw	16		01/01/2017	13	nr							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	Maghera 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					
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		

Table 40a – Nominated Outputs

The following tables identify those PC13 nominated outputs delivering in Year 1 of 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
Sub programme 1 – Base Maintenance Water			
JA271	Killylane WTW		Under construction Target 2014/15
Sub programme 4 – WTW			
JP669	Killyhelvin WTW – Enforcement Order		Under construction. Operational target 2014/15
JR463	Dorisland WTW GAC plant		Under construction. Operational target 2014/15
Sub programme 5 – Trunkmains			
JR460	Gravity 2 – McVeighs Well to Oldpark SR		Under construction. Operational target 2014/15
JG035	Ballydougan to Newry TM – Phase 2B		Under construction. Operational target 2014/15
JR432	Castor Bay to Belfast TM		Under construction. Operational target 2014/15
Sub programme 6 – Service Reservoirs and Towers			
JV830	Crieve SR		Operational target 2014/15
Sub-programme 8 – Watermains Rehabilitation			
JI024	MIMP West Freeze Thaw Improvements	2013/14	
JI025	MIMP South Freeze Thaw Improvements	2013/14	
JI026	MIMP North Freeze Thaw Improvements		Under construction. Completion Target 2014/15
JI027	MIMP Central Freeze Thaw Improvements	2013/14	
JI028	MIMP East Freeze Thaw Improvements		Under construction. Completion Target 2014/15

Sub programme 12 – UIDs				
Sort ref	Nominated outputs reference	NIW project Code	Project title	Year claimed
1	UID065	KT415	Glenmore WwPS Lisburn CSO Upgrade	2013/14
2	UID259	KS939	Pattons Bridge (Blackrock WwPS)	
		KV154	Newry Road SPS Upgrade Warrenpoint	
3	UID095		Newry Road SPS Warrenpoint	2013/14
4	UID234		Drumsesk Road Header Tank CSO	2013/14
		KS372	Market Street SPS Upgrade Downpatick	
5	UID044		Market Street SPS	
		KF037	Annagher SPS and Rising Main	

Sort ref	Nominated outputs reference	NIW project Code	Project title	Year claimed
6	UID245		Annagher SPS	2013/14
7	UID246		Campbells Garage WwPS	2013/14
8	UID247		Washing Bay Road WwPS	2013/14
	UID359		Canal Quay WwPS	2013/14
		KV161	Castlewellan DAP Stage 1	
9	UID031		Ballylough Rd. CSO 02	2013/14
10	UID033		Mill Hill CSO 04	2013/14
11	UID036		Annsborough Park CSO 01	2013/14
		KS937	Annsborough Park WwPS Upgrade	
12	UID032		Annsborough Park WwPS	
		KT403	Drumbeg Drive Lisburn WwPS Enhancement	
13	UID070		Maralin Avenue CSO 02	
		KS875	Bangor Work Package 6 Lukes Point WwPS	
14	UID189		Lukes Point SPS 11	
		KT391	Lisburn Dap Stage 1	
15	UID066		Waterside 2 CSO 07	
16	UID067		Hilden PS CSO 13B	
17	UID068		Hilden PS CSO 13A	
18	UID069		Antrim Street CSO 25	
19	UID072		New Holland WwTW	
20	UID073		Duncans Road CSO 15	See note (b)
21	UID074		Laws Yard CSO 14	
22	UID221		Waterside 1 CSO 01	
23	UID222		Linenhall Street CSO 03	
24	UID223		Antrim Street CSO 05	
25	UID224		Clonevin Park CSO 10	
26	UID225		Sprucefield WwPS Screen CSO 20	
27	UID226		Antrim Road CSO 24 + Flooding	
28	UID227		Bow Street CSO 26	
29	UID228		Ballynahinch Road 2 CSO 27	
30	UID229		Grand Street Screen CSO 28	
		KS873	Bangor DAP WP 2 Rathmore Stream UIDs	
31	UID013		Westburn Crescent CSO 3A	
32	UID014		Crawfordsburn Road CSO 03B	
33	UID015		Crawfordsburn Road CSO 03C	
		KR480	Hollywood Sewer Catchment Investigations	
34	UID218		Palace Barracks CSO 110	
35	UID219		Jacksons Road CSO 52	
36	UID220		Strathearn Court CSO 53	
		KR439	Millisle DAP Stage 2 UIDs	
37	UID076			
		KR417	Ormeau Avenue Sewer Investigations and feasibility Study for Pollution Resolution	
38	UID191		Cromac Street CSO 95	
39	UID192		Outside Holiday Inn CSO 97	
40	UID193		Dublin Road Cinema CSO 96	
41	UID194		Bankmore Street/Dublin Road CSO 81	
42	UID265		Sandy Row CSO 94	
		KG183	Portadown DA Network Improvements – Meadow Lane and Bann Street	
43	UID081		Meadow Lane CSO 06	

Sort ref	Nominated outputs reference	NIW project Code	Project title	Year claimed
44	UID082		Meadow Lane CSO 07	
45	UID083		Portmore Street CSO 08	
46	UID085		Clonavon Avenue CSO 11	
47	UID223		Meadow Lane WwPS CSO 32	
48	UID086		Meadow Lane CSO 12	
		KF330	Armagh DAP Stage 1 UIDs	
49	UID001		Scotch Street CSO 2	
50	UID002		Scotch Street CSO 1	
51	UID003		Courthouse 1 CSO	
52	UID005		The Mall East CSO	
53	UID006		English Street CSO Scheme 2	
54	UID007		Drumcairn SPS Scheme 3	
55	UID008		Millford SPS	
56	UID009		Killylea SPS	
57	UID010		Newry Road SPS	
58	UID173		Mall West CSO	
59	UID175		Alexander Road CSO	
60	UID176		Gillis Lane CSO	
		KS879	Bangor DAP Work Package 4 Bangor Marina CSOs	
61	UID018		Somerset Avenue CSO 11	
62	UID019		Bridge Street CSO 13	
63	UID020		Quay Street CSO 14	
64	UID021		Tennyson CSO 10	
65	UID022		Queens Parade CSO 12	
		KS877	Bangor DAP Work Package 5 Clondeboye Stream UIDs	
66	UID023		Castle Park CSO 07	
67	UID179		Rugby Avenue CSO 8A	
68	UID180		Brunswick Road CSO 8B	
69	UID181		Abbey Street CSO 8F	
70	UID182		Abbey Street CSO 8E	
71	UID183		Railway View Street CSO 8G	
72	UID184		Abbey Park CSO 9	
73	UID185		Avonlea Park CSO 6	
74	UID186		Rosemary Crescent /Inglewood Park CSO 5	
75	UID187		Clondeboye Road CSO 5B	
76	UID263		Belfast Road CSO 8C	
77	UID264		Belfast Road CSO 8D	
		KS902	Dundrum DAP UIDs	
78	UID237		Parochial House CSO 02	
79	UID238		Main Street CSO 04	
80	UID239		Flynn's WwPS CSO 05	
		KT114	Hillsborough WwTW	
81	UID071		Magherageery PS CSO 18	2013/14
		KS848	Newcastle WwTW	
82	UID260		Harbour WwPS	2013/14
		KR501	Carrickfergus WwTW Upgrade	
83	UID272		Carrickfergus CSO	
84/101	UID/244	KN646	Winters Lane CSO	2012/13
	UID052	KR488	Woodcot Ave/Linen Gardens CSO 24	2013/14
		KL468	Strathfoyle, Londonderry Syphon Inlet Screen	

Sort ref	Nominated outputs reference	NIW project Code	Project title	Year claimed
	UID114		Caw Park CSO 023	
	UID380		Gransha Park WwPS No. 2	
	UID043	KC415	Screen Road CSO	
		KS373	Church Street SPS Upgrade	
	UID 046		Meadowlands CSO3	2013/14
	UID 047		Church Street CSO1	2013/14
	UID 048		Scotch Street CSO4	2013/14
	UID 049		Scotch Street CSO11	2013/14
	UID 050		Rathkeltair Terr CSO12	2013/14

Notes

- Rows in **bold** claimed in 2013/14 (11 No. FD Nominated)
- UID073 Duncans Road CSO15 after further investigations it was agreed with NIEA this was not a UID and so was to be removed.
- UID ref shown in **Green** (1 No.) is a PC13 nominated output delivered in PC10
- UID ref shown in **Red** (1No.) are additional UID's not identified at the time of the PC13 FD or the monitoring plan.
- UID ref shown in **Blue** (5 No.) are additional UID's originally defined as PC10 nominated outputs, delayed in formulating the PE10 programme that have subsequently been delivered in PC13. These schemes form part of Change Protocol.
- UID ref shown in **Purple** (1No) is an additional UID originally defined as PE10 nominated output but was delayed and subsequently been delivered in PC13. This scheme forms part of Change Protocol.
- Additional UIDs have been identified and agreed with NIEA as appropriate quality driven substitutions within the PC13 programme – these have been submitted as a draft change protocol but are omitted from this summary table until approvals are complete.

Sub-programme 15 and 16 WwTW				
NI Water project Code	Project title	Year claimed	Outstanding outputs	
KS225	Ardglass		Under construction. Completion target 2014/15	
KL350	Benone WwTW	2013/14		
KB459	Maghera WwTW		Under Construction. Completion Target 2014/15	
KS848	Newcastle WwTW	2013/14		
KB314	Gulladuff WwTW	2013/14		
KC302	Ballintoy WwTW		Lands purchased. Awaiting planning permission - PC15 completion.	
KV045	Mullaghbane WwTW	2012/13		
KV115	Forkhill WwTW	2012/13		
KT114	Hillsborough WwTW	2013/14		
KC296	Ballycastle WwTW		Delayed due to Land acquisition.	
KS235	Ballygowan WwTW		Delayed due to land acquisition.	

NI Water project Code	Project title	Year claimed	Outstanding outputs
KS389	Ballymartin and Blackrock WwTW's		Completion Target Ballymartin 2014/15 Blackrock 2015/16
KS355	Ballynahinch WwTW	2013/14	
KR409	Moneyreagh WwTW	2013/14	
KT126	Stoneyford WwTW		Under construction completing 2014/15
KT402	Dunmurry WwTW Sludge Facility	2013/14	
KS905	Kilmore WwTW		Year 2 deliverable – Land Issues necessitated combined Kilmore/Annacloy solution
KS944	Ballyhornan Outfall Screen	2013/14	
KS887	Ards South (Ballycranbeg)		Year 2 deliverable
KR530	Belfast WwTW Base Maintenance Phase 2	2013/14	
KR501	Carrickfergus Base Maintenance	2013/14	
KP672	Tempo WwTW		Year 2 deliverable
KP668	Lisnarrick WwTW		Year 2 deliverable
KP586	Clabby WwTW		Land Issues. PC15 deliverable
KN640	Dromore (Tyrone) WwTW		Under Construction. Completion Target 2014/15
KN631	Strabane WwTW	2013/14	
KN599	Donaghmore WwTW		Year 2 deliverable
KN596	Ballymagorry WwTW		Under Construction. Completion Target 2014/15
KL496	Feeny WwTW Replacement of Secondary Treatment		Under Construction. Completion Target 2014/15
KL493	Artigarvan WwTW		Year 2 deliverable
KL487	Nixon's Corner WwTW Londonderry		Year 2 deliverable
KL424	Magheramason WwTW		Under Construction. Completion Target 2014/15
KL394	Drunsum WwTW		Under Construction. Completion Target 2014/15
KL386	Gortnahey WwTW		Under Construction. Completion Target 2014/15
KI508	UWWTW MCert Compliance		Year 2 deliverable
KF346	Robinsonstown WwTW		Delayed due to Land acquisition.
KB459	Maghera WwTW Upgrade Phase 2	2013/14	

17 total including 3 Capital Base Maintenance Schemes

Note

- a) Rows in **bold** claimed in 2013/14 (17No. FD Nominated)
- b) WwTW ref shown in **Green** (2No.) is a PC13 nominated output delivered in PC10.

Sub programme 17 – Small Wastewater Treatment Works			
CAR Site Reference	Project title	Year claimed	Outstanding outputs
S00284	Thorney Glen	2013/14	
S00902	Rathlin Island	2013/14	
S03111	Fincarn	2013/14	
S0145	Procklis	2013/14	
S01179	Capecastle	2013/14	
S01456	Mountfield	2013/14	
S02999	Arney	2013/14	

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN- TABLE 41 KEY OUTPUTS
HEALTH & SAFETY INFORMATION (NIW only)**

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2010-11	CG	2011-12	CG	2012-13	CG	2013-14	CG	
A LOST TIME DUE TO SICKNESS AND ACCIDENTS AND INCIDENCE OF OCCUPATIONAL ILL HEALTH											
1	Employee total	nr	0	1,316	A2	1,317	A2	1,304	A2	1,250	A2
2	Total days lost due to sickness, accident and occupational ill health	nr	0	9,953	A2	8,510	A2	9,081	A2	9,962	A2
3	Total days lost - rate per 1000 employees	nr	2	7,563.07	A2	6,461.66	A2	6,963.96	A2	7,969.60	A2
4	Number of incidents of occupational ill health	nr	0	135	A2	144	A2	137	A2	142	A2
5	Incidents of occupational ill health - rate per 1000 employees	nr	2	102.58	A2	109.34	A2	105.06	A2	113.60	A2
B RIDDOR REPORTS											
6	Total RIDDOR incidents	nr	0	4	A1	4	A1	10	A1	6	A1
7	RIDDOR - rate per 1000 employees	nr	2	3.04	A1	3.03	A1	7.67	A1	4.80	A1
8	3-day accident rate per 1000 employees	nr	2	3.04	A1	3.03	A1	7.67	A1	4.80	A1
9	Major/fatal accident rate per 1000 employees	nr	2	0.00	A1	0.00	A1	0.00	A1	0.00	A1
C CONTRACTORS' LOST TIME DUE TO SICKNESS AND ACCIDENTS, AND INCIDENCE OF OCCUPATIONAL ILL HEALTH											
10	Contractors' employees total	nr	0	N/C		No data		No data		No data	
11	Total days lost due to sickness, accident and occupational ill health	nr	0	N/C		No data		No data		No data	
12	Total days lost - rate per 1000 employees	nr	2	N/C		No data		No data		No data	
13	Number of incidents of occupational ill health	nr	0	N/C		No data		No data		No data	
14	Incidents of occupational ill health - rate per 1000 employees	nr	2	N/C		No data		No data		No data	
D CONTRACTORS' RIDDOR REPORTS											
15	Total RIDDOR incidents	nr	0	7	B2	2	B2	6	B2	6	B2
16	RIDDOR - rate per 1000 contractors' employees	nr	2	N/C		No data		No data		No data	
17	3-day accident rate per 1000 contractors' employees	nr	0	N/C		No data		No data		No data	
18	Major/fatal accident rate per 1000 contractors' employees	nr	2	0.00	A2	0.00	B2	0.00	B2	0.00	B2

Table 41 – Health and Safety Information (NIW only)**Lines 1 - 5 - Lost time**

In 2013/14 financial year NI Water lost a total of 9962 working days due to sickness which was equivalent to 7.97 working days lost per employee. The KPI attendance in 13/14 was 96.8% and NI Water delivered an actual rate of 96.4%.

Restructuring continued during 2013/14 which resulted in 17 employees (16.58 FTE as some were part time staff) leaving through a voluntary early severance/retirement (VER/VS) package.

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 taken where appropriate. Human Resources work in partnership with Line Managers, the NI Water Employee Support Officer, Independent Occupational Health, Carecall (our counselling provider) and employees to assist those on long term sick to return to work and to facilitate reasonable adjustments where required.

Our attendance rate slipped in 2013/14 and we noted an increase in staff absence with critical related illnesses during the second half of the year. We also had 3 Deaths in Service during this year and 4 medical retirements after periods of long-term absences. In 2014/15 we will be delivering line management training on attendance management and line managers will have more accountability in managing the attendance of their staff.

Psychiatric/psychological was the highest reason for days lost due to sickness in 2013/14 at 18.6%. However, this has reduced from 2012/13 which was 19.3%.

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.

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 our all our staff.

Line 6 – Total RIDDOR incidents

The NIW procedure for reporting accidents and incidents is set out in Procedure PRO 008 within the NIW H&S Manual, revised March 2012 (approved at Standing Committee March 2012). All accidents and incidents must be reported to line management as soon as practical. The independent electronic Risk Reporting System, capable of "tracking accidents" has been in place since 1 April 2009.

It is the relevant Line Manager's responsibility to ensure all accident details are recorded on DATIX.

DATIX entries are examined by the H&S Team and statistical trends are presented monthly by the Head of H&S at Board for discussion.

There were 6 RIDDOR reportable incidents within NIW in 2013/14 and all of these relate to more than 3-day accident-related absences.

NB: While NI Water reports all over 3 day incidents under the RIDDOR Regs.

Line 7 – RIDDOR Rate per 1000 employees

The DATIX process, as described for Line 6 above, provides the total number of RIDDOR incidents while the denominator, the total number of employees has been calculated within the HR Directorate as 1250. This gives the RIDDOR rate per 1000 employees as 4.8 for 2013/14.

Line 8 – 3 day accident Rate per 1000 employees

As all the RIDDOR incidents refer to accident-related absence (ref. line 6 commentary), the information in Line 8 mirrors that of Line 7.

Line 9 – Major Fatal accident Rate per 1000 employees

The information gathering process is again as described for Line 6 above. No fatal injuries occurred in 2013/14.

Lines 10 – 14 - Contractors' lost time

Contractors continue to be engaged in a wide range of work across NIW. 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 Sewage services and this includes contractors engaged in the construction of new works (ref. line 15 commentary). NIW has, throughout 2013/14, been engaged in a continuing process of change, regarding the numbers of contractors assisting in the delivery 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, NIW has no ready method of calculating the number of contractors' staff engaged in core activity and this is unlikely to change in the short term.

Line 15 – Contractors' RIDDOR reports

The NI public regards all work related with Water and Sewage services, including design and build work, to be closely associated with NIW. NIW, in turn, recognises its duty of care to all of its contractors as "Client", when they are carrying out any works, and therefore see its duty as one of "leadership". NIW therefore keeps a record of all contractor and subcontractor "incidents", which will include any incidents relating to transient workers. NIW encourages the reporting of "near-misses" by contractors to facilitate a shared learning experience.

All Contractor and subcontractor incidents are recorded on DATIX and for 2013/14 the total number of RIDDOR incidents reported to NIW by all of its contractors was 6. Contractor performance is monitored by the NIW Executive Committee and Board at their monthly meetings.

Lines 16 - 17 – Contractor RIDDOR and 3 day accident rates

Information is not collected for this line as NIW, in this period of transition, has no ready method of calculating the numbers of contractors' employees working on NIW contracts.

Line 18 – Contractor major fatal accident rate per 1000 employees

There were no major or fatal accidents connected with NIW's contractors or sub-contractors, including transient workers. This allows this rate to be calculated as zero.

Table 42 – PPP Reporting**Service Dates**

No Change

Contracted Adjustments To Payment Mechanisms & Contract Changes:**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 North Down Ards UV Change:

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

Omega Supplemental Agreement 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 of Service 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

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.

Alpha: EIB Step Down Change

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).

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] 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).

Contractual Performance Failures during AIR14 Period:

Alpha Performance Deductions:

- 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 can provide a supporting CD with all 12 monthly Payment Calculation Schedules for the AIR year). Total deductions: [REDACTED]*

- Water Quality Failures can be referenced on Payment Calculation Tab 9 under the column headed 'QRF' for each Facility (*The Company can provide 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 can provide a supporting CD with all 12 Lims Exceedance Reports for the Alpha Facilities*). Total deductions: [REDACTED]

Kinnegar Performance Deductions

- The Company has determined failures against the contracted odour performance standards and the sludge dry solids output in October 2013 [REDACTED], November 2013 [REDACTED] and March 2014 [REDACTED]. The Contractor disputes the application of these deductions and the Company has accrued the sums until the disputes are settled.

Omega Performance Deductions

- The Company has determined and the Contractor has accepted the following failures on the Wastewater services during the period:
 - Overtopping Inlet Screens at Bullays Hill PS: [REDACTED]
 - Odour Failure at Ballynacor WWTW: [REDACTED]
 - Odour Failure at Ballyrickard WWTW: [REDACTED]
 - Failure to report a complaint within 24 hours at North Down Ards WWTW: [REDACTED]
- The Company has determined and the Contractor has not accepted the following failures on Sludge Services during the period:
 - Incinerator Stack Emission Failures: [REDACTED]
 - Odour Emission Failures: [REDACTED]

The Contractor disputes the application of these deductions and the Company has accrued the sums until the disputes are settled.

- The Company has withheld sludge payments pending further investigations for the following potential failure events:
 - Failure to receive the Company's sludges from Belfast WWTW on a given day: [REDACTED]

The Contractor disputes the application of these withholdings and the Company has accrued the sums until conclusive evidence is established.

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 undisputed deductions listed above totalling [REDACTED] have been included in this line, as credit notes have been received accordingly. The value in Line 9 is adjusted from this figure to reflect other disputed deductions prior to AIR14, which have also been credited by the Contractor. The remaining disputed sums in AIR14, totalling [REDACTED] have not been credited and are not therefore reflected in Line 9.
- **Project Kinnegar;** The disputed deductions above totalling [REDACTED] remain disputed and are not therefore reflected in Line 9.

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 no material changes to the PPP Facilities during the period, although the process of consolidating the 5 odour control facilities into a single stack as part of the Duncrue St Sludge Facility PPC Permit Improvement Condition is currently ongoing and will be complete during AIR15 period.

Line 4 & Line 5

No Change from AIR13 data

Note: As the atypical expenditure, efficiencies, performance deductions (Omega) and residual interest (Omega) were not divisible by site the cross totals 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 2012/13.

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 increased by 2% from 2012/13 driven by a combination of inflation and flow variations in the year.

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 2013/14 were [REDACTED], an [REDACTED] on the 2012/13 amount of [REDACTED].

Omega

During 2013/14 [REDACTED] of performance deductions were recognised by the contractor and credit notes were issued. The details behind each of these are as follows:

Wastewater Services Performance Deductions:

The Company has determined Odour Performance Deductions at Ballynacor in Nov-12 and Jun to Dec-13 totalling [REDACTED].

The company has determined a Flow Management Failure at Richhill in Nov 12 with a [REDACTED] deduction made and accepted by the Contractor.

Sludge Services Performance Deductions:

The Company applied deductions of [REDACTED] for odour performance failures in November 12 at the Duncrue St Sludge Facility. In AIR 13 this were detailed as disputed performance deductions. This has been agreed in NIW's favour in 2013/14.

Kinnegar

No credits for performance deductions at Kinnegar have been received in the 2013/14 year.

Line 10 - Atypical expenditure**Alpha [REDACTED]**

- 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 2013/14 were [REDACTED]
- 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 2013/14.
- In 2013/14 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.

Kinnegar - nil**Omega [REDACTED]**

- During 2013/14 an amount of [REDACTED] has been provided to allow for the Contractor's legal costs should adjudications relating to the historic Omega claims rule against NIW. The amount held in accruals for settlement of these claims has reduced slightly in 2013/14 from [REDACTED] to [REDACTED] arising from the in-year payment for a condenser unit included within the liability amount.
- The North Down Disinfection Change implemented in Sept 2011 resulted in a [REDACTED] efficiency saving in 2013/14. 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 2013/14.
- 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 2013/14 with an ongoing saving of [REDACTED] per annum.

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 2013/14 against the baseline contract at award:

Alpha

The Quality Monitoring Changes executed in Apr 10 and Jun 12 resulted in a [REDACTED] efficiency saving in 2013/14. This change reduced the frequency of sampling with an attendant reduction in performance risk.

A further [REDACTED] was deducted from invoices in year resulting from the reorganisation of staff on transfer change implemented in 2009/10.

Omega

The North Down Disinfection Change implemented in Sept 2011 resulted in a [REDACTED] efficiency saving in 2013/14. This was a Service Level Adjustment change in treated effluent performance requirements to reflect the lower standards of the Water Order Consent.

Supplemental Agreement 4 executed in 2011/12 reflecting a change in wastewater flow management performance requirements resulted in a [REDACTED] deduction in 2013/14.

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 finance lease model has been revised in 2013/14 in order to ensure that the finance lease repayment term matches the contract term. This exercise also involved correctly allocating a proportion [REDACTED] of the capacity charge to opex reflecting the fact that the capacity charge contains an element of fixed operating costs. The site split of the capital repayment is calculated as follows:

Capital Repayment and Interest						
	Fin Model					
	Capacity	Capital	Interest/	Pro Rata		
	Charge	Maint	Capital	Interest	Capital	
	£k	£k	£k	£k	£k	
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	After	
	per Fin Model	Indexation	2013/14
	£k	£k	£k
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. The amount allocated to interest in 2013/14 has fallen significantly from 2012/13 arising from the change in the repayment profile of the finance lease and the allocation of an element of the capacity charge to operating costs. See point 13 above for site allocation workings.

The Company's statutory accounts have been prepared on an IFRS basis in 2013/14. 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	██████	██████	██████	██████
Ballynacor Lagoons	██████	██████	██████	██████

An amount of ██████ included in unitary charge accruals of ██████ relates to the outstanding monthly invoices for February and March unpaid at 31 March 2014. Also included in this amount is ██████ 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 ██████ of disputed amounts arise from 2012/13 Omega and Kinnegar disputes in relation to performance deductions.

The ██████ has reduced slightly from the AIR13 amount of ██████ arising from the in-year payment for a condenser unit included within the 2012/13 accrual amount.

During the year ██████ of work was completed in relation to the remediation of the Ballynacor Lagoons. As at 31 March 2014, ██████ remains in provisions in relation to Ballynacor Lagoons.

Line 21 - Distribution input

Data has been updated to reflect the methodology in Table 10 Line 26, where the variance in demand from the PPP sites placed by the Company, along with the variation in total water into distribution delivered by the Company contrive to give a new calculated figure for the individual sites and the Alpha contract as a whole.

Line 21a – Water treatment works capacity

There has been no change to the minimum required capacity of the Alpha WTW under the contract.

Line 22- Length of mains

This data has not changed since AIR 13.

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.

For 2013, the WTWs in service have now stabilised with 20 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.

2013 PPP WTW Included in calculations

WTW Code	WTW Name	Turbidity 95 %ile	>= 0.5 NTU
W1301P	Moyola PPP	0.146	0
W1701P	Ballinrees PPP	0.196	0
W2308P	Castor Bay PPP	0.191	0
W3301P	Dunore Point PPP	0.197	0
W3315P	Forked Bridge PPP	0.196	0

Line 25 – Source type

This data had changed in AIR13 to reflect the NI Water opinion that Ballinrees WTW should define three sources i.e. Ballinrees IR, Altikeeragh IR and an intake from the River Bann. All other WTW defined Sources remain unchanged from AIR 13. The changes have been reflected in Table 12.

Line 26 – Treatment type

No change to the data since AIR13.

Line 27 – Average pumping head

The APH for 'Alpha Total' and 'Water Services Total' has complied with the requirements of Table 42 Line 27 guidance notes, wherein the Company use the PPP Distribution Input utilised in AIR14.

Lines 28 – 29 – Sewerage data

No Change from AIR13 data.

Line 30 – population equivalent of total load received

Variation in calculated PE stems from variation in the measured sewage loads delivered to the sites by the Company, being the only variable part of the PE calculation.

Line 31 - Load received by STW's

Variation in calculated load stems from variation in the measured sewage loads delivered to the sites through the Company's sewer network.

Lines 32 – 36 - Consents

There have been no changes to the Water Order Consents.

Line 37 - Classification of treatment works

No change to the treatment Facility classifications since AIR13

Line 38 - Size band of sewage treatment works

No change to the treatment Facility size banding since AIR13

Line 39 - Total sludge imported from NI Water

From the 31 March 2010 the Omega Contractor has assumed responsibility for disposal of all NI Water sludges. The total Sludge imported from NI Water operated WWTW is recorded as 31.687 TTDS (last year the figure was 31.269 TTDS).

Lines 40 - Sludge produced by the PPP facility

Whilst the total sludge production recorded against each PPP contract and PPP as a whole is broadly consistent with last year's records, the records for each of the individual Omega sites are different from those recorded in AIR13.

The variations are tabulated below;

PPP Production	AIR14	AIR13	AIR12	AIR11	AIR10
Armagh WWTW	0.547	0.535	0.570	0.759	0.84
Richhill WWTW	0.071	0.065	0.066	0.213	0.21
Ballynacor WWTW	2.007	2.069	3.330	2.468	2.29
Ballyrickard WWTW	1.126	1.158	1.225	1.627	1.717
NDA WWTW	1.920	1.628	1.559	1.753	1.654
Kinnegar WWTW	0.643	0.726	0.823	0.792	0.7
Omega Screenings and Grit	0.088	0.106			
Kinnegar Screenings and Grit	0.047	0.022			
Totals	6.449	6.309	7.573	7.612	7.411

The change in Kinnegar is potentially the return to a more standardised loading profile as in earlier years; additionally the figure collated has utilised the %DS obtained by Glen Water in relation to the imports from Kinnegar which standardises the overall Sludge calculation but is at variance with the Kinnegar self-calculation. This differential would account for 0.039 TTDS.

The changes in sludge production records data for Omega reflect a probable combination of

- (i) Cumulative tolerances in the representative nature of dry solids sampling and flowmeter accuracy (particularly on smaller sites)
- (ii) a mix of improved methodologies and record keeping systems for liquid and cake movements (as demanded by the Omega contract payment processes) implemented by end of AIR11, and
- (iii) the loads delivered to the PPP contractor from the NI Water sewer network, outside the PPP contractor's control, and

- (iv) The timing of data capture, where prolonged dry periods can have a fluctuating effect from year to year on absolute values

Line 41 - Sludge exported to Duncrue Incinerator

Variances are accounted for in Line 40 commentary above.

Line 42 - Sludge exported to other PPP facilities

No change from AIR13

Line 43 - Sludge exported to NI Water

No change from AIR13

Lines 44 - Sludge disposed of from site to - Farmland Untreated

Nil disposal arising from the Contractor's choice of alternative compliant disposal routes.

Lines 45 - Sludge disposed of from site to - Farmland Conventional

Nil disposal, arising from the Contractor's choice of alternative compliant disposal routes.

Lines 46 - Sludge disposed of from site to - Farmland Advanced

A full year service resulted in 0.384 TTDS arising from the Contractor's choice of alternative compliant disposal routes. This is at variance from the nil report in AIR13.

Lines 47 - Sludge disposed of from site to - Incineration

A full year service resulted in 36.545 TTDS being incinerated as the contractor's preferred method of disposal, this being a larger amount than reported in AIR13.

Lines 48 - Sludge disposed of from site to - Landfill

A full year service resulted in 0.135 TTDS arising from the Contractor's choice of alternative compliant disposal routes. The value represents only both PPP Contractors sludges arising from grit and/or screenings removed directly from the sites to landfill; which is larger than that 0.128TTDS reported in AIR13. 0 TTDS of dewatered sludge cake was disposed to landfill.

Lines 49 - Sludge disposed of from site to - Composted

A full year service resulted in 0 TTDS arising from the Contractor's choice of alternative compliant disposal.

Lines 50 - Sludge disposed of from site to - Land Reclamation

A full year service resulted in 0.409 TTDS arising from the Contractor's choice of alternative compliant disposal routes. AIR13 reported a disposal of 0.549 TTDS.

Lines 51 - Sludge disposed of from site to - Other (Willow Coppice)

A full year service resulted in 0.657 TTDS arising from the Contractor's choice of alternative compliant disposal routes. Air 13 reported a disposal of 0.515 TTDS.

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 AIR13 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	██████████	██████████
EIB Step-down		██████████
██████████ respect of reorganisation costs		██████████
Total		██████████

Kinnegar

The data is provided as an aggregate of the monthly invoiced amounts by the Contractor to the Company. 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.

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 2013/14 ██████████ of performance deductions were recognised by the contractor.

In addition this line includes atypical amounts as follows:

Provision for Omega Contractor Legal Costs	██████████
North Down and Ards Disinfection Change	██████████
Omega Service Level Adjustment (Supplemental 4)	██████████
Change in Weighbridge Calibration Frequency	██████████
Total	██████████

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. ■

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		2		3		4	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2010-11	CG	2011-12	CG	2012-13	CG	2013-14	CG
A WATER SUPPLY										
DG2 PROPERTIES RECEIVING PRESSURE/FLOW BELOW REFERENCE LEVEL										
1 Total connected properties at year end	000	1	806.4	C2	810.4	A2	818.0	A2	825.0	B2
2 Properties below reference level at end of year	nr	0	2020	B3	1,748	B3	1,420	B3	1,257	B3
3 % of total properties at risk of low pressure (OPA Low pressure value)	%	2	0.25	B3	0.22	B3	0.17	B3	0.15	B3
DG3 PROPERTIES AFFECTED BY UNPLANNED INTERRUPTIONS										
4 More than 6 hours	nr	0	476,289	B3	7,023	B3	10,487	B3	6,742	B3
5 More than 12 hours	nr	0	214,274	B3	765	B3	2,607	B3	1,195	B3
6 More than 24 hours	nr	0	40,959	B3	18	B3	1,554	B3	12	B3
7 Total connected properties at year end	nr	0	806,444	C2	810,367	A2	817,960	A2	824,974	B2
8 OPA supply interruption value	nr	2	95.79	B3	0.97	B3	1.98	B3	0.97	B3
DRINKING WATER QUALITY										
9 % MZC Iron	%	2	97.60	A1	98.15	A1	97.36	A1	98.28	A2
10 % MZC Manganese	%	2	99.69	A1	99.87	A1	99.83	A1	99.79	A2
11 % MZC Aluminium	%	2	99.47	A1	98.77	A1	99.59	A1	99.60	A2
12 % MZC Turbidity	%	2	99.95	A1	99.92	A1	99.70	A1	99.84	A2
13 % MZC Faecal Coliforms	%	2	99.97	A1	99.96	A1	99.89	A1	99.86	A2
14 % MZC Trihalomethanes	%	2	98.33	A1	99.29	A1	97.50	A1	98.50	A2
15 Average Overall MZC figure (Drinking Water Quality OPA value)	nr	2	99.17	A1	99.33	A1	98.98	A1	99.31	A2
B SEWERAGE SERVICE										
DG5 SEWER FLOODING - OVERLOADED										
16 Flooding incidents in the year (overloaded sewers)	nr	0	10	B3	15	B2	189	B2	6	B2
17 Flooding incidents (overloaded sewers attributed to severe weather)	nr	0	4	B3	1	B2	181	B2	5	B2
18 Number of domestic properties connected to sewerage system	000	1	612.1	C2	618.5	A2	623.3	A2	628.3	B2
19 % of domestic properties flooded by overloaded sewers (Overloaded sewers OPA value)	%	4	0.0010	C2	0.0023	B2	0.0013	B2	0.0002	B2
DG5 SEWER FLOODING - OTHER CAUSES										
20 Flooding incidents (other causes - equipment failures)	nr	0	4	B3	4	B2	15	B2	14	B2
21 Flooding incidents (other causes - blockages)	nr	0	14	B3	17	B2	22	B2	36	B2
22 Flooding incidents (other causes - collapses)	nr	0	10	B3	2	B2	4	B2	5	B2
23 Number of domestic properties connected to sewerage system	000	1	612.1	C2	618.5	A2	623.3	A2	628.3	B2
24 % of domestic properties flooded by other causes (Other causes OPA value)	%	4	0.0046	C2	0.0037	B2	0.0066	B2	0.0088	B2
DG5 PROPERTIES ON THE FLOODING REGISTER										
25 2 in 10 register at end of year	nr	0	6	B4	17	B2	30	B2	62	B2
26 Removed by company action	nr	0	0	B4	23	A1	20	A1	3	B2
27 1 in 10 register at end of year	nr	0	3	B4	10	B2	10	B2	8	B2
28 Number of domestic properties connected to sewerage system	000	1	612.1	C2	618.5	A2	623.3	A2	628.3	B2
29 % of domestic properties considered to be at risk of flooding by sewage (At risk OPA value)	%	4	0.0012	B4	0.0073	B2	0.0088	B2	0.0110	B2
C SECURITY OF SUPPLY										
DG4 HOSEPIPE RESTRICTIONS										
30 Hosepipe restrictions (OPA value)	%	0	0.0	A1	0	A1	0	A1	0	A1
LEAKAGE										
31 Leakage (Target)	nr	2	175.00		171.00		168.00		169.00	
32 Leakage (Actual)	nr	2	176.97	B4	168.32	B4	161.75	B4	167.21	B3
33 % of leakage target not met (Leakage OPA value)	nr	2	1.79	B4	1.34	B4	0.00	B4	0.00	A1
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	97	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	100	A2	97	A2	97	A2
36 Security of supply index - company's actual based on planned level of service	nr	0	97	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
D CUSTOMER SERVICE										
DG6 - RESPONSE TO BILLING CONTACTS										
38 Number dealt with within 5 working days	nr	0	103,710	B3	92,808	B2	77,118	B2	78,398	B2
39 Total billing contacts	nr	0	104,897	B3	92,832	B2	77,051	B2	78,463	B2
40 % of billing contacts answered within 5 working days (DG6 OPA value)	%	2	98.87	B3	99.97	B2	100.09	B2	99.92	B2
DG7 - RESPONSE TO WRITTEN COMPLAINTS										
41 Total written complaints	nr	0	4,327	B2	2,340	B2	3,173	B2	2,505	B2
42 Number dealt with within 10 working days	nr	0	4,326	B2	2,323	B2	3,166	B2	2,498	B2
43 % of written complaints answered within 10 working days (DG7 OPA value)	%	2	99.98	A1	99.27	A1	99.78	A1	99.72	A1
DG8 - BILLING METERED CUSTOMERS										
44 Company or customer readings (or both)	nr	0	65,156	A1	66,057	A1	66,622	A1	66,840	A1
45 Total metered accounts	nr	0	100,071	A1	103,876	A1	110,164	A1	115,227	A1
46 Metered accounts excluded from indicator	nr	0	32,275	A1	36,388	A1	42,688	A1	47,784	A1
47 % of metered accounts which have meter based bills (DG8 OPA value)	%	2	96.11	A1	97.88	A1	98.73	A1	99.11	A1
DG9 TELEPHONE CONTACT										
48 Total calls not abandoned	nr	0	300,722	A2	229,270	A2	216,006	A2	223,256	A2
49 Total calls received on customer contact lines	nr	0	340,989	A2	231,245	A2	219,399	A2	226,881	A2
50 % calls not abandoned (0.25 of DG9 OPA value)	%	2	88.19	A2	99.15	A2	98.45	A2	98.40	A2
51 All lines busy	nr	0	699,566	A2	0	A2	0	A2	0	A2
52 % calls not engaged (0.25 of DG9 OPA value)	%	2	32.77	A2	100.00	A2	100.00	A2	100.00	A2
53 Call handling satisfaction (0.5 of DG9 OPA value)	nr	2	4.59	A1	4.57	A1	4.54	A1	4.63	A1
E ENVIRONMENTAL PERFORMANCE										
POLLUTION INCIDENTS										
54 Number of High & Medium category pollution incidents (Sewage)	nr	0	45	A1	44	A1	18	A1	26	A1
55 Equivalent population served (resident)	000	2	2,115.82	C5	2,126.74	C5	2,107.96	C5	2,131.81	C5
56 Number of High and Medium sewage incidents per million resident population equivalent (pe) served (H&M sewage incidents OPA value)	nr	2	21.27	C5	20.69	C5	8.54	C5	12.20	C5
57 Number of Low category pollution incidents (Sewage)	nr	0	217	A1	202	A1	163	C5	188	A1
58 Number of Low sewage incidents per million resident population equivalent (pe) served (Low sewage incidents OPA value)	nr	2	102.56	C5	94.98	C5	77.33	C5	88.19	C5
59 Number of High & Medium category pollution incidents (Water)	nr	0	1	A1	0	A1	0	A1	0	A1
60 Winter population	000	2	1,814.34	C2	1,823.89	C2	1,842.61	C2	1,850.54	C2
61 Number of High and Medium water incidents per million resident population served (H&M water incidents OPA value)	nr	2	0.55	C2	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	A2	0.00	A2	0.00	A1
SEWERAGE SERVICE - BREACH OF CONSENT										
63 WWTW Discharge consent % compliance (WWTW compliance OPA value)	%	2	4.63	C5	3.56	C5	1.10	C5	1.89	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		2		3		
			NIW	CG	PPP	CG	NIW Total	CG	
A ELECTRICITY CONSUMPTION									
1	Grid electricity purchased (excluding renewable energy)	MW.hr	0	150,164	A1	47,104	A1	197,269	A1
2	Grid electricity purchased - renewable energy	MW.hr	0	49,592	A1	47,248	A1	96,840	A1
3	Non-renewable electricity generated and used	MW.hr	0	0	A1	0	A1	0	A1
4	Renewable electricity generated and used	MW.hr	0	288	A1	543	A1	831	A1
5	Total electricity consumption	MW.hr	0	200,044	A1	94,895	A1	294,940	A1
6	Non-renewable electricity generated and exported to the grid	MW.hr	0	0	A1	0	A1	0	A1
7	Renewable electricity generated and exported to the grid	MW.hr	0	1,410	A1	0	A1	1,410	A1
8	Total renewable energy generated	MW.hr	0	1,698	A1	543	A1	2,241	A1
B GROSS ANNUAL OPERATIONAL GHG EMISSIONS									
B.1 Scope 1 Emissions									
9	Direct emissions from burning fossil fuels (including natural gas CHP generation on site)	t.CO ₂ e	0	2,825	B3	3,389	B3	6,213	B3
10	Process and fugitive emissions	t.CO ₂ e	0	0	B3	4,137	B3	4,137	B3
11	Transport: company owned or leased vehicles	t.CO ₂ e	0	2,386	B3	92	B3	2,477	B3
B.2 Scope 2 Emissions									
12	Total grid energy used (including CHP electricity purchased).	t.CO ₂ e	0	88,988	A2	42,032	A2	131,020	A2
B.3 Scope 3 Emissions									
13	Business travel on public transport and private vehicles used for company business	t.CO ₂ e	2	611.29	B3	0.00	CX	611.29	B3
14	Outsourced activities (if not included in Scope 1 or 2) Energy and other	t.CO ₂ e	2	0.00	C3	12446.02	C3	12446.02	C3
15	Not used								
16	Not used								
17	Gross operational emissions	t.CO ₂ e	0	94,810	A3	62,096	A3	156,905	A3
C Net annual operational emissions									
18	Exported renewables (generated on-site and exported)	t.CO ₂ e	2	-628.10	A1	0.00	A1	-628.10	A1
19	Green tariff electricity purchased	t.CO ₂ e	2	-25397.44	A1	-17743.24	A1	-43140.68	A1
20	Net operational emissions	t.CO ₂ e	0	68,784	A2	44,352	A2	113,136	A2
D ANNUAL OPERATIONAL GHG INTENSITY RATIO VALUES									
21	Operational GHG per Ml of treated water	t.CO ₂ e/Ml	3	0.300	B2	0.162	B2	0.219	B2
22	Operational GHG per Ml of sewage treated (flow to full treatment)	t.CO ₂ e/Ml	3	0.573	CX	0.507	CX	0.546	CX
23	Operational GHG per Ml of sewage treated (based on water distribution input)	t.CO ₂ e/Ml	3	0.892	CX	0.789	CX	0.849	CX
E RENEWABLE INCENTIVES									
24	Revenue from renewable energy sales and incentives	£000	3	141.640	A1	0.000	A1	141.640	A1

Table 45 – Energy Consumption and Greenhouse Gas Accounting

Definition

Table 45 contains data relevant to the Company's energy consumption and greenhouse gas accounting as requested for the AIR14 return.

Processing rule:

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.

Table 45 reports emissions generated by the Company and by outsourced PPP concessions in separate columns and also calculates a Company total.

Reporting outputs

Table 45 has been populated in line with the reporting requirements outlined in the methodology statement for this table and this is detailed further below.

Data has been provided in Table 45 for energy consumption, gross and net tonnes CO₂e 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 37.47% of its total electricity consumption from renewable sources within the reporting period.

Self generated renewable electricity has been via hydro schemes across several sites and a steam turbine at the Incinerator. The outputs are detailed in Table 1.

Table 1

Site	kWhrs
Fofanny	288,038
Oaklands	118,377
Silent Valley	1,291,564
Incinerator	543,460

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 25% of consumption would be from good quality climate change levy exempt renewable sources. This is achieved by placing a specific schedule of c26 sites on a green supply. In addition

a supplier for another schedule of 4 sites, c25%, has also provided green energy therefore currently 50% of electricity supplied to NI Water is green.

Lines 9 – 17 - Gross annual operational GHG emissions (Lines 15 and 16 not used)

This section provides gross annual operating GHG emissions in tonnes CO₂e 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 CO₂e 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 CX 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 ₂ e/ML	0.300	0.162	0.219	B2
Annual operational emissions intensity ratio per Ml of treated sewage (FFT)	tonnes CO ₂ e/ML	0.573	0.507	0.546	CX
Annual operational emissions intensity ratio per Ml of treated sewage (DI Input)	tonnes CO ₂ e/ML	0.892	0.789	0.849	CX

Calculations for the tonnes CO₂e/ML intensity ration have been generated from the UK Water Industry Carbon Accounting Workbook V8.0 (March 2014) outputs using data from

AIR14 Table 10 and Table 14. The confidence grading for the FFT is at CX 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 V8.0

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 8.0 (March 2014) for greenhouse gas emissions associated with the provision of water, wastewater, sludge disposal, administrative function and transport in its AIR14 return.

Data sources for the AIR14 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 V8.0 and are aligned to the DECC/Defra guidelines using the relevant emissions factor for kg of CO₂ per measured unit of energy. The calculations are carried out within locked cells in the Carbon Accounting Workbook V8.0

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.CO₂e/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.CO₂e/ML GHG intensity output figure for treated waste water includes all carbon emissions from waste water pumping, waste water treatment, sludge treatment and disposal, and associated administrative and transport emissions divided by the volume of waste water treated.

The GHG intensity figures for treated water and waste water for the calculations above have been derived from the volumes of water and waste water as reported in tables 10 and 14 of the Company's AIR14 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 AIR14 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.
- Company air travel (estimated at 50 tonnes CO²e based on AIR10, but not included in the AIR11, AIR12 or AIR13 returns).
- 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 above will be addressed in year to enable a fuller return for AIR14 reporting only if deemed in further discussion to have a material impact on the emissions level.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN
ANNUAL INFORMATION RETURN - TABLE 46 SERVICEABILITY
SERVICEABILITY RETURN

DESCRIPTION	UNITS	DP	REPORTING YEAR 2003-04	REPORTING YEAR 2004-05	REPORTING YEAR 2005-06	REPORTING YEAR 2006-07	REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10	REPORTING YEAR 2010-11	REPORTING YEAR 2011-12	REPORTING YEAR 2012-13	REPORTING YEAR 2013-14	
A WATER INFRASTRUCTURE														
1	Water population	000	2	1,685.27	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
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
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
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
5	Mains bursts per 1000km	nr	1				194.6	138.5	142.9	147.9	137.4	100.6	92.7	86.1
6	Interruptions to supply greater than 3 hours resulting from equipment failure	nr	0	45,064	35,700	24,995	30,360	39,883	36,882	39,040	518,065	44,960	40,697	44,499
7	DG3 Properties affected by interruptions >12 hrs (unplanned & unwarned)	nr	0	1,610	1,676	1,670	767	1,839	2,010	3,675	214,274	765	2,607	1,195
8	DG3 Percentage properties affected by interruptions >12 hrs (unplanned & unwarned)	%	2	0.21	0.22	0.21	0.10	0.23	0.25	0.46	26.57	0.09	0.32	0.14
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
10	Number of regulatory Iron samples exceeding the drinking water standard PCV	nr	0		46	41	45	34	41	43	35	30	47	36
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
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
13	Customer contacts (Discoloured water)	nr	0					4,085	3,840	3,010	2,344	2,464	3,465	
14	Customer contacts per 1000 population (Discoloured water)	nr	2					2.30	2.15	1.67	1.30	1.35	1.90	
15	Distribution losses	ML/d	2	167.87	141.90	127.76	118.74	111.38	131.49	140.55	130.66	122.02	115.44	127.31
16	Company's overall serviceability assessment for water infrastructure	Text	N/A								Stable	Stable	Stable	
B WATER NON-INFRASTRUCTURE														
17	Number of regulatory samples taken for Turbidity at WTWs	nr	0		9,570	9,884	9,703	9,471	8,949	7,751	7,563	6,927	6,617	6,617
18	Number of regulatory samples taken for Turbidity at WTWs which exceed 1.0 NTU	nr	0		254	153	114	50	42	41	29	28	11	18
19	Number of regulatory samples taken for Turbidity at WTWs which exceed 0.8 NTU	nr	0		539	337	169	99	78	70	55	41	20	38
20	Percentage of regulatory samples taken for Turbidity at WTWs which exceed 0.8 NTU	%	2		5.52	3.44	1.74	1.04	0.87	0.90	0.73	0.59	0.30	0.57
21	Number of regulatory samples taken for THMs at customer taps	nr	0		1,057	952	704	752	765	784	432	417	393	396
22	Number of regulatory THM samples exceeding the drinking water standard PCV	nr	0		358	239	150	243	141	30	8	3	10	6
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
24	Percentage of regulatory THM samples exceeding 75% of the drinking water standard PCV	%	2		54.68	46.16	39.77	58.64	37.78	7.27	7.41	5.04	13.23	7.83
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
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
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
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
29	Unplanned (reactive) maintenance	tbc	tbc											96.40
30	Company's overall serviceability assessment for water non-infrastructure	Text	N/A								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
32	Total number of rising main failures	nr	0						25	25	37	26	41	16
33	Total number of gravity sewer collapses	nr	0						1,368	988	1,229	1,191	1,081	1,104
34	Total number of sewer collapses	nr	0					677	1,393	1,013	1,266	1,217	1,122	1,120
35	Sewer collapses per 1,000km	nr	1					47.3	96.3	68.7	84.9	80.6	73.6	72.7
36	Total number of sewer blockages	nr	0					16,912	28,010	26,409	26,230	24,444	20,801	18,062
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
38	Number of H, M pollution incidents from sewer network (CSOs, rising mains and foul sewers)	nr	0							38	34	30	14	14
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
40	Properties flooded in the year (other causes)	nr	0					366	23	5	28	23	41	55
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
42	Total number of equipment failures repaired	nr	0					11,715	10,965	10,882	11,492	11,476	10,333	10,899
43	Number of pumping station emergency overflows triggered by equipment failure	nr	0										21	18
44	Number of sewer repairs	nr	0							1,013	1,261	1,226	1,122	1,120
45	Company's overall serviceability assessment for sewerage infrastructure	Text	N/A								Stable	Stable	Stable	
D SEWERAGE NON-INFRASTRUCTURE														
46	% WwTW discharges not compliant with numeric consents	%	1	30.0	20.0	18.0	16.0	16.0	12.0	12.0	11.4	6.7	6.7	8.2
47	% of total p.e. served by WwTWs not compliant with numeric consents	%	2	38.20	37.00	33.20	23.10	15.50	9.80	8.60	4.11	4.05	1.39	5.47
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
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
50	Percentage of BOD, SS and Ammonia compliance sample results which exceeded their numeric consent value	%	2		4.49	5.65	3.17	2.10	3.28	3.01	3.35	2.58	2.79	4.14
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
52	Small WwTW compliance measure	%	2											77.20
53	Unplanned (reactive) maintenance	tbc	tbc											94.50
54	Company's overall serviceability assessment for sewerage non-infrastructure	Text	N/A								Stable	Stable	Stable	

Table 46 – Serviceability**Line 1- Water population**

The population data used by NIW has been derived from 2012 based Population Projections obtained from NISRA (Northern Ireland Statistics & Research Agency) website at

<http://www.nisra.gov.uk/archive/demography/population/projections/wni12cc.xls>

NISRA Population Projection 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.

The water population is calculated by deducting the assessed population residing in those properties not connected to the water distribution network.

The population for unconnected properties has been calculated from two sources:

1. The gross number of unconnected household properties is provided by Customer Services
2. The unconnected occupancy is sourced from the NIHE Housing Condition Survey 2009 (statistical annex – Table 5.7)

http://www.nihe.gov.uk/2009_northern_ireland_house_condition_survey_statistical_annex.pdf.

The number of unconnected properties is 8,000 and an occupancy rate is calculated at 0.866 (rounded) to determine a total population for unconnected properties of 6,925. The total supplied population for all connected properties is calculated as 1,827.79 (x1000).

Line 2 – Total connected properties at year end

Table 46 Line 2 has been copied from AIR14 Table 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, 3, 4, 7, 13, 17a etc - (Rapid Property Summary as the input). We have extended this method for the completion of Table 46 also.

Line 3 - Total length of mains

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 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. There have been no significant improvements in data quality since the AIR13 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.

The initial figures submitted showed a decrease in the total length of mains for this reporting period when compared to the AIR13 figures. On investigation it was ascertained that this reduction was due to a 12km trunk main being marked as "Out of Service" on the Corporate Asset Register. Given that this trunk main has not been abandoned and could

possibly come back into service the reporter has recommended that “Out of Service” trunk mains should be included in the Total length of Mains. Following this recommendation the methodology has been updated to include trunk mains that are indicated as out of service on the Corporate Asset Register in this year’s figure.

Line 6 - Interruptions to supply greater than 3 hours resulting from equipment failure

This serviceability measure was introduced for the first time in AIR13. As a result, the AIR13 commentary covered the historical period 2003/04 to 2011/12 as well as 2012/13. NI Water’s AIR14 commentary focuses on 2013/14 with references to historical trends.

1. Limitations in quality or availability of submission

The outturns for the period 2007/08 to 2013/14 should be viewed as more reliable and accurate than the outturns for the period 2003/04 to 2006/07.

The explanatory comments accompanying ‘other cause’ interruptions for the period 2007/08 to 2012/13 i.e. interruptions not assigned to one of eleven standard causes, vary in terms of both availability and clarity.

2. Changes to historical outturns

The historical outturns remain as they were reported for AIR13 and for PC15.

3. Assumptions made in the assessment process

As the definition of ‘equipment failure’ is open to interpretation, NI Water has summarised its interpretation as follows:

Interruptions can be caused by:

- company employees
- contractors working for or on behalf of the company
- third parties

For the purposes of this assessment, all properties affected by interruptions caused by third parties and company contractors have been excluded.

	Reason for Exclusion
Third Parties	Such interruptions are the result of third party damage/interference and not equipment failures
Engineering Procurement Contractors	The majority of interruptions (<i>those that are planned and warned</i>) are the result of mains rehabilitation and not equipment failures The small number of interruptions that are unplanned and unwarned are normally the result of human error and not equipment failures
Customer Field Services Contractors	The majority of interruptions are of too short a duration to report The small number of reportable interruptions are normally the result of human error and not equipment failures

NI Water has been capturing information on the cause of interruptions since February 2007 to date by assigning one of eleven standard causes to each interruption record. During this time, when an interruption was not attributed to one of the standard causes, for example, a pump equipment M&E failure, it was assigned to the 'other' causes category and in the majority of cases, explanatory comments were provided although the level of clarity varies.

The following table lists the twelve standard causes of interruption under which all interruption records have been categorised since the introduction of the OMIS database in February 2007.

	Standard Cause	Assessment	Reason
1	Burst Main/Main Repair	Include	'Below Ground' Infrastructure Failure
2	Electricity Supply Failure	Exclude	Electricity Company Responsible
3	Hydrant Abuse	Exclude	Third Party Responsible
4	Install New Fitting	Exclude	New work
5	Leakage Detection	Exclude	Proactive work
6	Mains Rehabilitation	Exclude	Proactive work
7	New Mains Tie In	Exclude	New work
8	Other		Review comments and reassign cause
9	Replacement Fitting	Include	'Below Ground' Infrastructure Failure
10	Routine Maintenance	Exclude	Proactive work
11	Service Pipe Repair	Include	'Below Ground' Infrastructure Failure
12	Water Supply Failure		Review comments and reassign cause

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. In the case of electricity supply failures, it is assumed that the interruptions were unrelated to a failure of the Company's standby generation facilities and therefore, the assessment excludes all properties affected by such events.

For the purposes of reporting on Table 46 Line 6, the Company has reviewed its greater than 3 hours interruption records assigned to the 'Other' and 'Water Supply Failure' standard causes along with available information listed in the 'Comments' field or additional comments sought from the Field Managers and where possible, has identified interruptions caused by equipment failures.

The decision has been taken to further exclude from the assessment:

- all properties affected by planned and warned interruptions where it was not been 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 following table lists a further 19 causes of interruption, identified as a result of this exercise.

	Cause of Interruption	Assessment	Reason for Exclusion
1	Airlock in Main	Include	'Below Ground' Infrastructure Failure
2	Blockage in Main	Include	'Below Ground' Infrastructure Failure
3	Broken / Jammed / Misaligned Fitting	Include	'Below Ground' Infrastructure Failure
4	Cause Unknown – Planned & Warned	Exclude	Most planned and warned interruptions are not the result of equipment failure
5	Cause Unknown – Unplanned, Unwarned	Include	Most unplanned, unwarned interruptions are the result of equipment failure
6	Control / Sensor Failure	Include	'Below Ground' Infrastructure Failure
7	Failure to Re-valve Following Step Testing	Exclude	Human Error
8	Frozen Service Pipe	Include for purposes of table completion but discuss impact of exclusion in commentary	
9	Human Error	Exclude	Human Error
10	Increased Demand	Include for purposes of table completion and unless third party responsibility has been confirmed	
11	Low SR (Distribution Issue)	Include	'Below Ground' Infrastructure Failure
12	Low SR (Supply Failure)	Exclude	'Above Ground' Infrastructure Failure
13	Main Abandoned / Altered / Diverted	Exclude	'Below Ground' Infrastructure Change
14	New Connection	Exclude	New Work
15	Pump Equipment M&E Failure	Include	'Below Ground' Infrastructure Failure
16	Telemetry Failure	Include	'Below Ground' Infrastructure Failure
17	To Facilitate Third Party/ NIW Contractor	Exclude	Requested Interruption
18	Water Quality Issues	Include, only if related to a distribution issue	
19	Water Treatment Works Failure	Exclude	'Above Ground' Infrastructure Failure

The following table lists the annual numbers of DG3 properties affected by interruptions greater than 3 hours resulting from equipment failure as reported in AIR14 Table 46 Line 6.

	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14
Number of properties	45,064	35,700	24,995	30,360	39,883	36,882	39,040	518,065	44,960	40,697	44,499

Methodology used to Calculate Outturn for 2013/14

The AIR14 outturn has been calculated using the same methodology previously used to calculate the outturns for 2007/08 to 2012/13.

Data Source: Monthly Composite Interruption Data Files (Apr 14 to Mar 14)

The following table shows how the Master Data Set is consistent with the figures reported in AIR14 Table 2 Lines 5, 9 and 13 and how the figures for Table 46 Line 6 have been derived from the Master Data Set.

	Records	Properties
Unplanned Interruptions: More than 3 hours	666	41,412
Planned and Warned Interruptions: More than 3 hours	815	35,468
Interruptions Caused by Third Parties: More than 3 hours	24	2,452
Overruns: More than 3 hours	33	2,092
Total (Master Data Set of All Interruption Records >3 Hours)	1,538	81,424
Third Party Interruptions (<i>Removed</i>)	-24	-2,452
EP Interruptions (<i>Removed</i>)	-666	-21,866
CFS Interruptions (<i>Removed</i>)	-0	-0
Non Equipment Failures (<i>Removed</i>)	-170	-10,065
'Other' Cause Non Equipment Failures (<i>Removed</i>)	-36	-2,542
'Water Supply Non Equipment Failures (<i>Removed</i>)	-0	-0
Total (AIR14 Table 46 Line 6)	= 642	= 44,499
Equipment Failures (<i>Retained</i>)	624	42,108
'Other' Cause Equipment Failures (<i>Retained</i>)	+18	+2,391
'Water Supply' Equipment Failures (<i>Retained</i>)	+0	+0
Total (AIR14 Table 46 Line 6)	= 642	= 44,499
Burst Main/Main Repair	593	40,336
Other - Telemetry Failure	4	1,913
Replacement Fittings (e.g. SV, FH)	16	926
Service Pipe Repair/Replacement	15	846
Other – Burst Main/Main Repair	10	462
Other - Pump Equipment M&E Failure	4	16
Total	= 642	= 44,499

4. Changes in methodology used to capture or report data

Information on the cause of interruptions was not captured prior to 2007/08. The reported outturns for the period 2003/04 to 2006/07 are estimates based on the historical relationship between unplanned interruptions and interruptions resulting from equipment failure for the period 2007/08 to 2012/13 with the impact of significant freeze/thaw and adverse weather events removed.

The reported outturns for the period 2007/08 to 2012/13 are based on any available information on the cause of interruptions and where the cause of interruptions could not be determined, the assumption that only unplanned interruptions resulted from equipment failure. The reported outturns are based on the inclusion of significant freeze/thaw and adverse weather events as this is consistent with the approach that has previously been adopted by NI Water for AIR Table 2 Lines 5 to 8.

For the purposes of AIR14, where the precise cause of interruption could not be identified from the comments provided as part of the DG3 interruption record, additional comments were sought from the Field Managers or from the associated SFA reports and any requirement to make an assumption regarding the cause of an interruption was removed.

Impact of methodology changes on reported figures and data trends

In order to assess the impact of methodology changes on reported figures and data trends, the Company has analysed and compared the trendlines for the periods 2007/08 to 2013/14 and 2003/04 to 2013/14, excluding the impact of significant freeze/thaw and adverse weather events.

When the calculated outturns for the period 2007/08 to 2013/14 are based on the exclusion of significant freeze/thaw and adverse weather events, the trendline equation is $y = 35,663e^{0.0284x}$ and the trendline values are as follows:

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Trendline Value	36,690	37,747	38,835	39,953	41,104	42,288	43,507

When the estimated outturns for the period 2003/04 to 2006/07 are combined with the calculated outturns for the period 2007/08 to 2013/14, the trendline equation becomes $y = 32,426e^{0.0237x}$ and the trendline values are as follows:

	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14
Trendline Value	33,204	34,000	34,815	35,650	36,505	37,381	38,277	39,195	40,135	41,098	42,084

The inclusion of estimated outturns for the period 2003/04 to 2006/07 causes a decrease in the rate at which numbers of affected properties have risen from 2007/08 to 2013/14 i.e. 6,817 properties (trendline range: 36,690 to 43,507) compared to 5,579 properties (trendline range: 36,505 to 42,084).

5. Performance which the company considers to be atypical

NI Water's KPI targets are based on typical performance less reductions that are considered to be both challenging and achievable through changing work and management practices, a greater understanding of the root cause of interruptions and through investment in infrastructure. When the Company fails a target, it is therefore an indication of atypical performance.

The following table shows NI Water's KPI targets for properties affected by unplanned and unwarned interruptions together with the corresponding outturns. Figures in bold text indicate instances where an outturn was worse than a target.

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
>6 hr Target	16,000*	9,653*	7,987*	8,089	7,864	7,673	7,473
Outturn (AIR T2 L6)	10,828*	8,801*	10,378*	476,289	7,023	10,487	6,742
>12 hr Target	2,000*	1,206*	1,198*	1,750	1,700	1,650	1,600
Outturn (AIR T2 L7)	1,960*	2,086*	3,947*	214,274	765	2,607	1,195
>24 hr Target	240*	80*	79*	80	80	80	80
Outturn (AIR T2 L8)	78*	621*	2,295*	40,959	18	1,554	12

**Note: Targets and outturns included third party interruptions & overruns*

Although Table 46 Line 6 relates to interruptions >3 hours, the above statistics still provide an indication of when performance was atypical i.e. instances when a target was missed. Based on the above statistics, the Company considers its performance to have been atypical in 2009/10, 2010/11 and 2012/13 as on these three occasions, all three outturns were worse than the corresponding targets.

6. Cause of atypical performance and basis of assessment

NI Water's atypical performance in 2009/10, 2010/11 and 2012/13 can be largely attributed to the following significant freeze/thaw and adverse weather events:

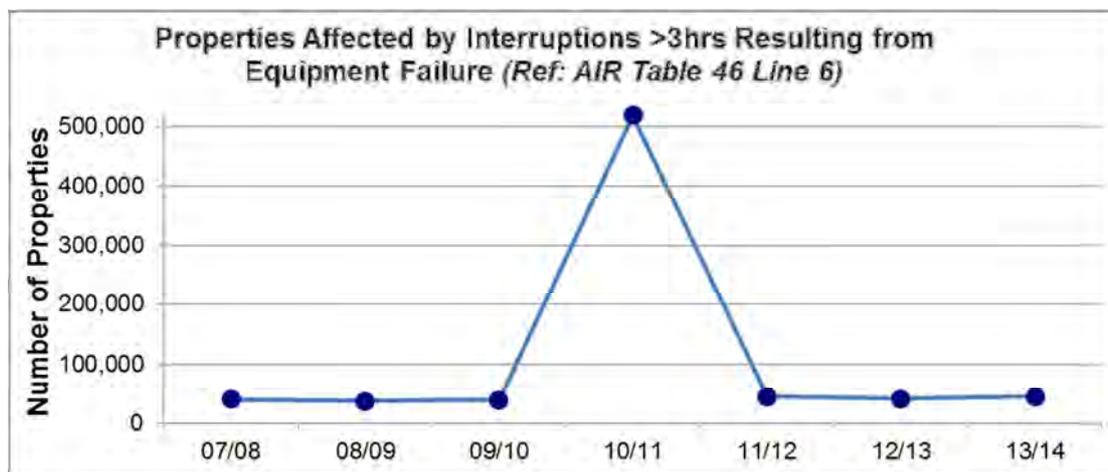
- Freeze/Thaw Event from 24 December 2009 to 21 January 2010
- Adverse Weather Event from 30 March to 5 April 2010
- Freeze/Thaw Event from 8 to 12 December 2010
- Freeze/Thaw Event from 21 December 2010 to 6 January 2011
- Adverse Weather Event from 22 to 27 March 2013

Atypical performance can also be attributed to a small number of other events involving more than 2,000 properties. The following table provides a list of all such events for the period 2007/08 to 2013/14.

Interrupt No.	Description of Equipment Failure	Date of Failure	Affected Properties
No Ref	Burst main, Omagh Town Centre	26 Jan 08	3,155
12920, etc	Burst main, Saintfield Road, Ballygowan	25 Jun 10	3,175
15132, etc	Burst 500mm trunk main, Head Road, Kilkeel	2 Feb 11	4,264
16737	Conlig telemetry fault	16 Aug 11	7,937
17474	Burst main, Moneymore Road, Magherafelt	30 Nov 11	2,247

19209	Burst 12 inch trunk main, Victoria Terrace, Portadown	25 Jun 12	2,142
22417	Burst 12 inch trunk main, Cambrai Street, Belfast	27 Jul 13	3,200
24137	Burst trunk main, Stiles Way, Antrim	5 Feb 14	5,669

The following graph shows the numbers of properties affected by supply interruptions >3 hours resulting from equipment failure for the period 2007/08 to 2013/14.



The graph clearly shows the impact of the early and late freeze/thaw events of 2010/11. The inclusion of equipment failures associated with freeze/thaw events makes it difficult to determine the year-on-year trend as such events are atypical in terms of both frequency and severity.

7. Quantification of impact on performance

The company has examined the impact of the removal of interruptions attributed to the freeze/thaw events of 2009/10 and 2010/11 and also, the adverse weather events of March 2010 and March 2013.

The following table provides a summary of the numbers of properties affected by interruptions >3 hours resulting from equipment failure together with an estimate of performance excluding the impact of significant freeze/thaw and adverse weather events and interruptions involving more than 2,000 properties.

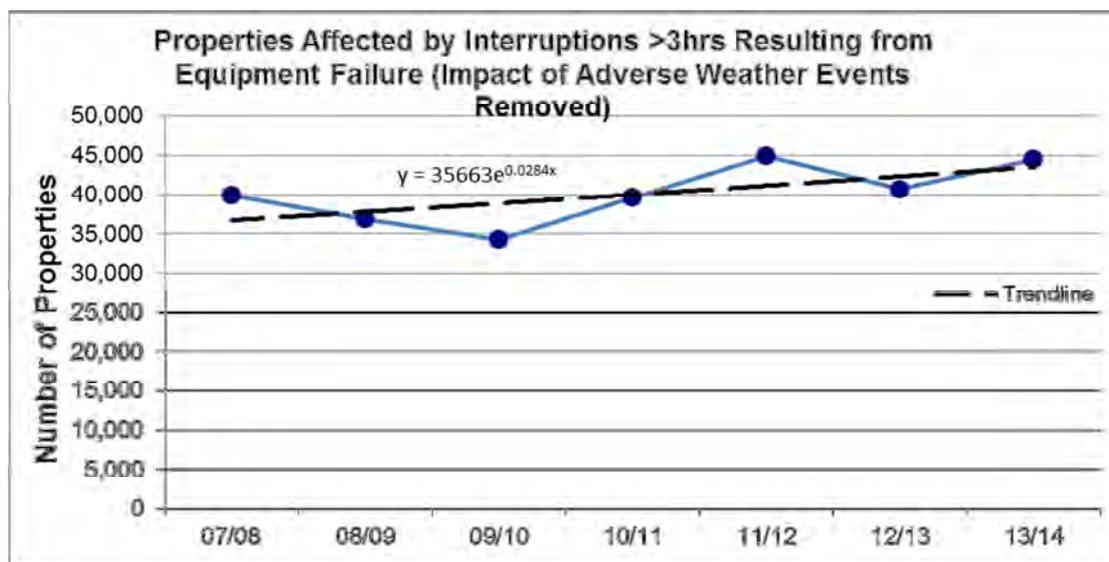
Properties Affected by Interruptions >3 Hours Resulting from Equipment Failure	07/08	08/09	09/10	10/11	11/12	12/13	13/14
Data Source: AIR13 Table 46 Line 6	39,883	36,882	39,040	518,065	44,960	40,697	44,499
'Other' Cause Equipment Failures (Removed)	N/A	N/A	-1,492	-3,398	N/A	-19	N/A
'Water Supply' Equipment Failures (Removed)	N/A	N/A	N/A	-16	N/A	N/A	N/A
2009/10 Freeze/Thaw – Frozen Pipes (Removed)	N/A	N/A	-1,564	N/A	N/A	N/A	N/A
2010/11 Freeze/Thaw – Supply Rotation (Removed)	N/A	N/A	N/A	442,767	N/A	N/A	N/A
2010/11 Freeze/Thaw – SR Drain Down (Removed)	N/A	N/A	N/A	-25,439	N/A	N/A	N/A
Actual Dec + Jan Unplanned Interruptions (Removed)	N/A	N/A	-12,887	-17,969	N/A	N/A	N/A
Typical Dec + Jan Unplanned Interruptions*	N/A	N/A	+11,171	+11,171	N/A	N/A	N/A
Estimate of Performance Excluding Significant Freeze/Thaw and Adverse Weather Events	39,883	36,882	34,268	39,647	44,960	40,678	44,499

Burst main, Omagh Town Centre on 26/01/08	-3,155	N/A	N/A	N/A	N/A	N/A	N/A
Burst main, Saintfield Road, Ballygowan on 25/06/10	N/A	N/A	N/A	-3,175	N/A	N/A	N/A
Burst 500mm trunk main, Head Road, Kilkeel on 02/02/11	N/A	N/A	N/A	-4,264	N/A	N/A	N/A
Conlig telemetry fault on 16/08/11	N/A	N/A	N/A	N/A	-7,937	N/A	N/A
Burst main, Moneymore Road, Magherafelt on 30/11/11	N/A	N/A	N/A	N/A	-2,247	N/A	N/A
Burst 12 inch trunk main, Victoria Terrace, Portadown on 25/06/12	N/A	N/A	N/A	N/A	N/A	-2,142	N/A
Burst 12 inch trunk main, Cambrai Street, Belfast on 27/07/13	N/A	N/A	N/A	N/A	N/A	N/A	-3,200
Burst trunk main, Stiles Way, Antrim on 05/02/14	N/A	N/A	N/A	N/A	N/A	N/A	-5,669
Estimate of Performance Excluding Unplanned Interruptions Involving >2,000 Properties	36,728	36,882	34,268	32,208	34,776	38,536	35,630

*Estimate based on average Dec + Jan unplanned interruptions (07/08, 08/09, 11/12 & 12/13)

8. Estimate of performance excluding impact of extreme or atypical events

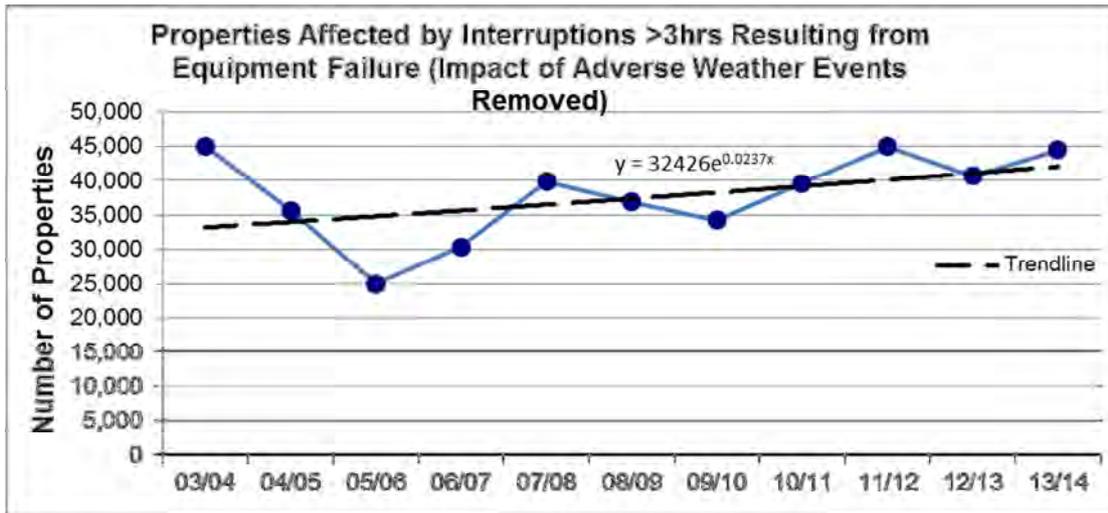
The following graph shows the numbers of properties affected by supply interruptions greater than 3 hours resulting from equipment failure with the impact of significant freeze/thaw and adverse weather events removed.



When the calculated outturns for the period 2007/08 to 2013/14 are based on the exclusion of significant freeze/thaw and adverse weather events, the trendline equation is $y = 35,663e^{0.0284x}$ and the trendline values are as follows:

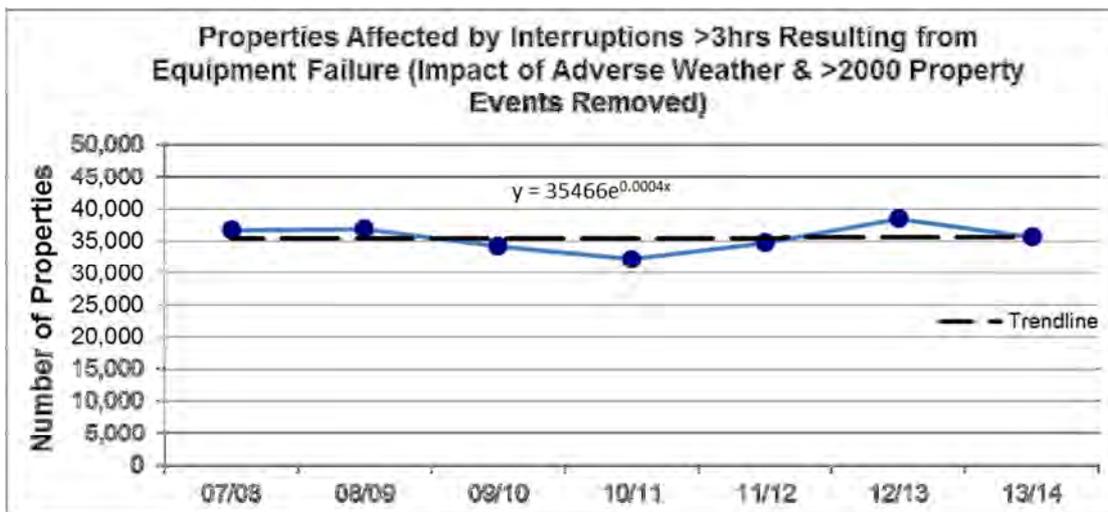
	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Trendline Value	36,690	37,747	38,835	39,953	41,104	42,288	43,507

The following graph is similar to the previous graph, except for the inclusion of the estimated outturns for the period 2003/04 to 2006/07. (See Section 5 of the commentary on Table 46 Line 6 for an explanation of the impact of methodology changes on reported figures and data trends)



9. Explanation of revised assessment

The final graph in the series shows the numbers of properties affected by supply interruptions greater than 3 hours resulting from equipment failure with the impact of significant freeze/thaw and adverse weather events removed, as well as the impact of interruptions involving more than 2,000 properties.



When the calculated outturns for the period 2007/08 to 2013/14 are based on the exclusion of significant freeze/thaw and adverse weather events **and** the further exclusion of the eight interruptions involving more than 2,000 properties, the trendline equation is $y = 35,466e^{0.0004x}$ and the trendline values are as follows:

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Trendline Value	35,480	35,494	35,509	35,523	35,537	35,551	35,565

The exclusion of the eight interruptions involving more than 2,000 properties causes a further decrease in the rate at which numbers of affected properties have risen from 2007/08 to 2013/14 i.e. 6,817 properties (trendline range: 36,690 to 43,507) compared to 85 properties (trendline range: 35,480 to 35,565).

Although the final graph does not represent the reported outturns for the period 2007/08 to 2013/14 (for the purposes of consistency, these have been reported including the impact

of significant freeze/thaw and adverse weather events), the Company deems this graph to be the best representation of the true data trend for this performance measure.

Although based on an exponential curve, in this particular instance the trendline approaches that of a straight line, a chance outcome considering the number of variables involved and the potential for remaining inconsistency. A straight line indicates '**stable**' performance year on year.

10. Overall assessment of serviceability - 'improving', 'stable', 'marginal' or 'deteriorating'

As information on the cause of interruptions was not collated by the Company prior to 2007/08, the view is that the assessment should be based on the seven-year period 2007/08 to 2013/14.

The conclusion is that based on an analysis of all properties affected by supply interruptions greater than 3 hours resulting from equipment failure for the seven-year period 2007/08 to 2013/14 and with the impact of extreme and atypical events excluded, NI Water's performance against this measure has been '**stable**'.

11. Explanation of 'marginal' or 'deteriorating' assessment and action planned to restore stable serviceability

As the Company has arrived at a '**stable**' assessment for this measure, an explanation of 'marginal' or 'deteriorating' assessment and action planned to restore stable serviceability is not required.

Line 7 - DG3 Properties affected by interruptions > 12hrs (unplanned & unwarned)

This serviceability measure was introduced for the first time in AIR13. As a result, the AIR13 commentary covered the historical period 2003/04 to 2011/12 as well as 2012/13. NI Water's AIR14 commentary focuses on 2013/14 with references to historical trends.

Note: The following commentary should be read in relation to Table 46 Line 8 as the Line 7 outturns are used to calculate the Line 8 outturns.

1. Limitations in quality or availability of submission

The outturns for the period 2007/08 to 2013/14 should be viewed as more reliable and accurate than the outturns for the period 2003/04 to 2006/07.

2. Changes to historical outturns

The historical outturns remain as they were reported for AIR13 and for PC15.

3. Assumptions made in the assessment process

Unlike Table 46 Line 6 where a number of assumptions have been made regarding the interpretation of an 'equipment failure', no such assumptions have been made regarding this assessment process.

4. Changes in methodology used to capture or report data

The AIR14 outturn has been calculated using the same methodology previously used to calculate the outturns for 2007/08 to 2012/13.

2013/14 Data Capture and Reporting: The figures were derived from AIR14 Table 2 Line 7. The following table lists the annual numbers of DG3 properties affected by unplanned and unwarned interruptions greater than 12 hours.

	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14
Number of Properties (Ref: AIR T2 L7)	1,610	1,676	1,670	767	1,839	2,010	3,675	214,274	765	2,607	1,195

Impact of methodology changes on reported figures and data trends

Unlike Table 46 Line 6 where the methodologies for the periods 2003/04 to 2006/07 and 2007/08 to 2013/14 differ, the methodology for Table 46 Line 7 is consistent throughout and the need to discuss the impact of methodology changes on reported figures is removed.

5. Performance which the company considers to be atypical

NI Water's KPI targets are based on typical performance less reductions that are considered to be both challenging and achievable through changing work and management practices, a greater understanding of the root cause of interruptions and through investment in infrastructure. When the Company fails a target, it is therefore an indication of atypical performance.

The following table shows NI Water's KPI targets for properties affected by unplanned and unwarned interruptions together with the corresponding outturns. Figures in bold text indicate instances where an outturn was worse than a target.

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
>6 hr Target	16,000*	9,653*	7,987*	8,089	7,864	7,673	7,473
Outturn (AIR T2 L6)	10,828*	8,801*	10,378*	476,289	7,023	10,487	6,742
>12 hr Target	2,000*	1,206*	1,198*	1,750	1,700	1,650	1,600
Outturn (AIR T2 L7)	1,960*	2,086*	3,947*	214,274	765	2,607	1,195
>24 hr Target	240*	80*	79*	80	80	80	80
Outturn (AIR T2 L8)	78*	621*	2,295*	40,959	18	1,554	12

***Note:** Targets and outturns included third party interruptions & overruns

Table 46 Line 7 relates to interruptions >12 hours and the above statistics provide an indication of when performance was atypical i.e. instances when a target was missed. Based on the above statistics, the Company considers its performance to have been atypical in 2009/10, 2010/11 and 2012/13 as on these three occasions, the outturns were worse than the corresponding targets.

6. Cause of atypical performance and basis of assessment

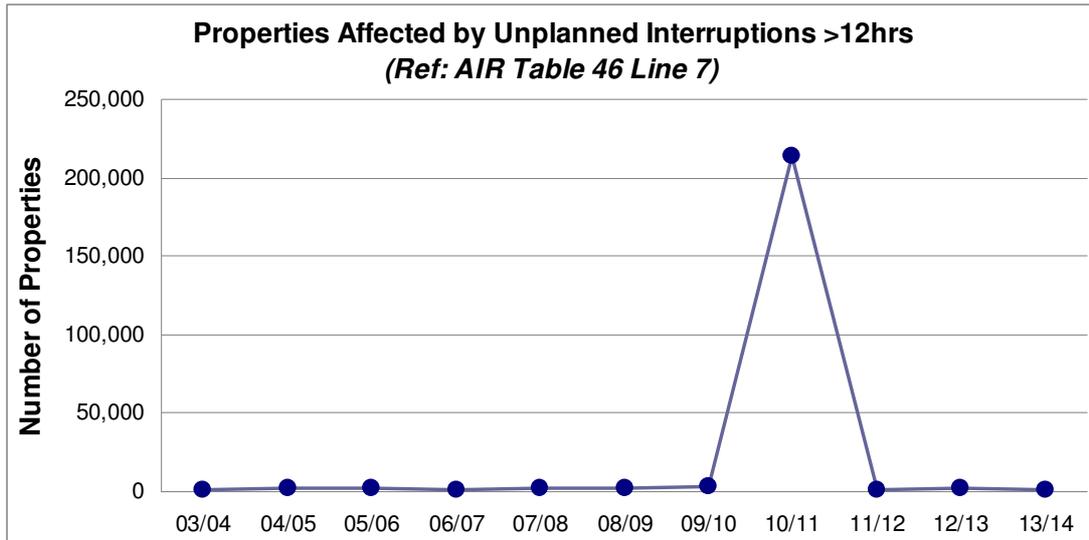
NI Water's atypical performance in 2009/10, 2010/11 and 2012/13 can be largely attributed to the following significant freeze/thaw and adverse weather events:

- Freeze/Thaw Event from 24 December 2009 to 21 January 2010
- Adverse Weather Event (30 March to 5 April 2010)
- Freeze/Thaw Event from 8 to 12 December 2010

- Freeze/Thaw Event from 21 December 2010 to 6 January 2011
- Adverse Weather Event (22 to 27 March 2013)

The Company’s atypical performance in 2010/11 can also be attributed to an incident involving a burst trunk main on the Head Road, Kilkeel in early February. A review of the cause of this interruption reveals that the repair equipment failed and replacement equipment had to be sourced, resulting in an atypical delay.

The following graph shows the numbers of properties affected by unplanned, unwarned supply interruptions >12 hours for the period 2003/04 to 2013/14.



The graph clearly shows the impact of the early and late freeze/thaw events of 2010/11. The inclusion of unplanned and unwarned interruptions associated with freeze/thaw events makes it difficult to determine the year-on-year trend as such events are atypical in terms of both frequency and severity.

7. Quantification of impact on performance

The Company has examined the impact of the removal of interruptions attributed to the freeze/thaw events of 2009/10 and 2010/11 and also, the adverse weather events of March 2010 and March 2013.

The following table provides a summary of the numbers of properties affected by unplanned and unwarned interruptions >12 hours during these events, together with an estimate of performance excluding their impact.

Properties Affected by Unplanned and Unwarned Interruptions >12 Hours	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14
Data Source: AIR Table 2 Line 7	1,610	1,676	1,670	767	1,839	2,010	3,675	214,274	765	2,607	1,195
09/10 Freeze/Thaw – Frozen Pipes (Removed)	N/A	N/A	N/A	N/A	N/A	N/A	-1,564	N/A	N/A	N/A	N/A
10/11 Freeze/Thaw – Supply Rotation (Removed)	N/A	-181,140	N/A	N/A	N/A						
10/11 Freeze/Thaw – SR Drain Down (Removed)	N/A	-25,439	N/A	N/A	N/A						
Actual Dec + Jan Unplanned Interruptions	N/A	N/A	N/A	N/A	N/A	N/A	-764	-3,756	N/A	N/A	N/A

(Removed))												
Typical Dec + Jan Unplanned Interruptions*	N/A	N/A	N/A	N/A	N/A	N/A	+241	+241	N/A	N/A	N/A	N/A
Adverse Weather (Removed)	N/A	N/A	N/A	N/A	N/A	N/A	-300	N/A	N/A	-1,588	N/A	N/A
Performance Excluding Significant Freeze/Thaw and Adverse Weather Events	1,610	1,676	1,670	767	1,839	2,010	1,288	4,180	765	1,019	1,195	

*Estimate based on average Dec + Jan unplanned interruptions (07/08, 08/09, 11/12 & 12/13)

The Company has also examined the impact of the further removal of an incident involving a burst 500mm trunk main on the Head Road, Kilkeel in early February 2011.

The following table provides a summary of the number of properties affected by this incident together with an estimate of performance excluding its impact.

	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14
Number of Properties before exclusion	1,610	1,676	1,670	767	1,839	2,010	1,288	4,180	765	1,019	1,195
Burst 500mm trunk main, Head Road, Kilkeel on 02/02/11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-3,440	N/A	N/A	N/A
Number of Properties following exclusion	1,610	1,676	1,670	767	1,839	2,010	1,288	740	765	1,019	1,195

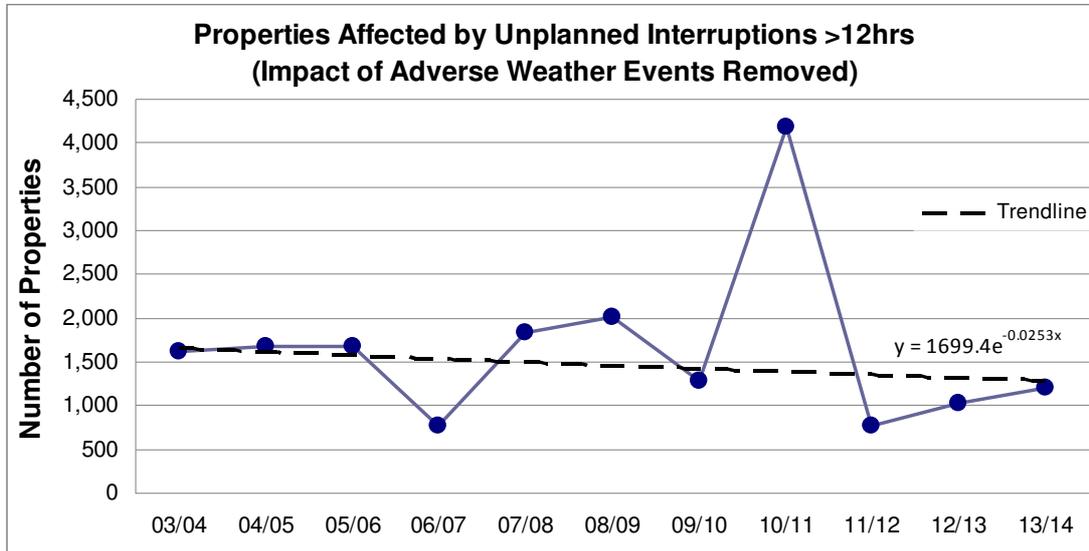
And the Company has examined the impact of the further removal of interruptions where the cause of interruption was unrelated to equipment failure.

The following table provides a summary of the numbers of properties affected by such interruptions together with an estimate of performance excluding their impact.

	07/08	08/09	09/10	10/11	11/12	12/13	13/14
Number of Properties before exclusion	1,839	2,010	1,288	740	765	1,019	1,195
Non Equipment Failures	-184	-652	-25	-43	-102	-2	-90
Number of Properties following exclusion	1,655	1,358	1,263	697	663	1,017	1,105

8. Estimate of performance excluding impact of extreme or atypical events

The following graph shows the numbers of properties affected by unplanned and unwarned supply interruptions greater than 12 hours with the impact of the freeze/thaw event of 2009/10 and the early and late freeze/thaw events of 2010/11 removed, as well as the impact of the adverse weather events of March 2010 and March 2013.

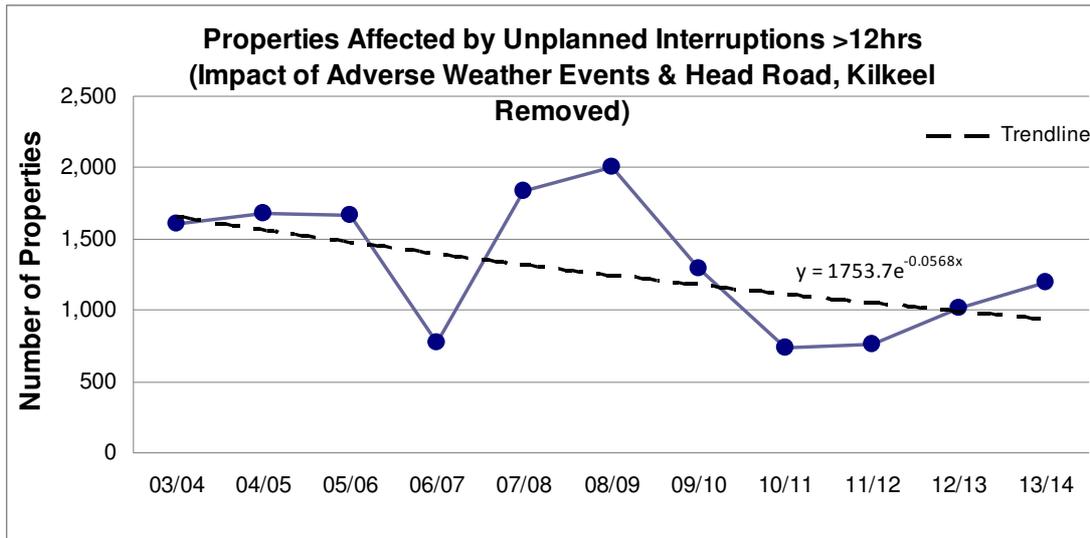


When the calculated outturns are based on the exclusion of significant freeze/thaw and adverse weather events alone, the trendline equation is $y = 1,699.4e^{-0.0253x}$ and the trendline values are as follows:

	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14
Trendline Value	1,657	1,616	1,575	1,536	1,497	1,460	1,424	1,388	1,353	1,320	1,287

The performance profile is still irregular, indicating that other atypical factors may be masking the true year-on-year data trend for this performance measure. The graph clearly shows the impact of the burst trunk main on the Head Road, Killeel in February 2011.

The following graph shows the numbers of properties affected by unplanned and unwarned supply interruptions greater than 12 hours with the impact of significant freeze/thaw and adverse weather events removed, as well as the impact of the Head Road incident.



When the calculated outturns are based on the exclusion of significant freeze/thaw and adverse weather events **and** the further exclusion of the Head Road incident, the trendline equation is $y = 1,753.7e^{-0.0568x}$ and the trendline values are as follows:

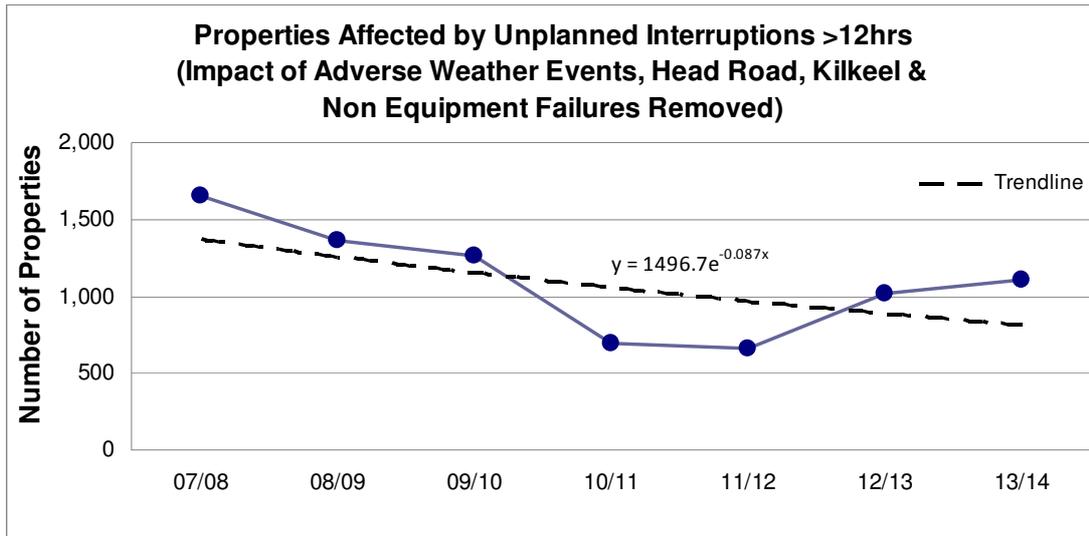
	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14
Trendline Value	1,657	1,565	1,479	1,397	1,320	1,247	1,178	1,113	1,052	994	939

Based on trendline analysis, the exclusion of the Head Road incident further increases the rate at which numbers of affected properties have fallen from 2003/04 to 2013/14 i.e. 370 properties (trendline range: 1,657 to 1,287) compared to 718 properties (trendline range: 1,657 to 939).

9. Explanation of revised assessment

There is still a possibility that other atypical factors may be masking the true year-on-year data trend for this performance measure. Therefore, NI Water has considered a fourth graph, based on the further exclusion of interruptions where the cause was unrelated to equipment failure. Examples include proactive work, new work, human error and other issues unrelated to asset performance. As these examples are not associated with a deterioration of the infrastructure, there is a greater likelihood of inconsistency.

The final graph in the series shows the numbers of properties affected by unplanned and unwarned supply interruptions greater than 12 hours for the period 2007/08 to 2013/14 with the impact of significant freeze/thaw and adverse weather events removed, as well as the impact of the Head Road incident and interruptions where the cause was unrelated to equipment failure.



When the calculated outturns are based on the exclusion of significant freeze/thaw and adverse weather events, the Head Road incident **and** the further exclusion of interruptions where the cause was unrelated to equipment failure, the trendline equation is $y = 1,496.7e^{-0.087x}$ and the trendline values are as follows:

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Trendline Value	1,372	1,258	1,153	1,057	969	888	814

Based on trendline analysis,

the exclusion of interruptions where the cause was unrelated to equipment failure further increases the rate at which numbers of affected properties have fallen from 2007/08 to 2013/14 i.e. 381 properties (trendline range: 1,320 to 939) compared to 558 properties (trendline range: 1,372 to 814).

Although the graph does not represent the reported outturns for the period 2003/04 to 2013/14 (for the purposes of consistency, these have been reported including the impact of significant freeze/thaw and adverse weather events), the Company deems this graph to be the best representation of the true data trend for this performance measure. The trendline conforms to an exponential curve with performance improving year on year but at a decreasing rate with time.

With the impact of atypical events removed, the trendline helps to highlight true instances of asset over and under performance.

Asset over performance in 2011/12 is attributed to the mild winter weather and an associated reduction in the number of bursts.

Asset under performance in 2012/13 is attributed to an incident on 15 February 2013 involving a burst on the 12 inch inlet to Greenhill Gauge Tank affecting supplies to Craigstown, Killylane and Craigadoo DMAs in Ballymena. 201 properties experienced an unplanned interruption of 14 hours as a result of the incident. (Ref: Interrupt No. 21283)

Asset under performance in 2013/14 is attributed to an incident on 8 March 2014 involving a burst on a 14 inch main adjacent to the 27 inch Carmoney – Dupont trunk main. 499 properties in Londonderry experienced an unplanned interruption of 21.25 hours as a result of the incident. (Ref: Interrupt No. 24404)

10. Overall assessment of serviceability - 'improving', 'stable', 'marginal' or 'deteriorating'

The conclusion is that based on an analysis of all properties affected by unplanned and unwarned supply interruptions greater than 12 hours over the last eleven years and with the impact of extreme and atypical events excluded, NI Water's performance against this measure has been **'improving'**.

This overall assessment of serviceability is based on the series of performance graphs produced for this measure which indicate a decreasing trend in the numbers of properties affected by unplanned and unwarned supply interruptions greater than 12 hours.

11. Explanation of 'marginal' or 'deteriorating' assessment and action planned to restore stable serviceability

As the Company has arrived at an **'improving'** assessment for this measure, an explanation of 'marginal' or 'deteriorating' assessment and action planned to restore stable serviceability is not required.

Line 8 - DG3 Percentage properties affected by interruptions >12 hrs (unplanned & unwarned)

Note: The commentary for Table 46 Line 7 should be read in relation to Table 46 Line 8 as the Line 7 outturns are used to calculate the Line 8 outturns.

The following table lists the annual DG3 percentage properties affected by unplanned and unwarned interruptions greater than 12 hours. The figures are based on the following information:

- DG3 properties affected by unplanned and unwarned interruptions greater than 12 hours, as reported in AIR Table 46 Line 7 (*originally reported in AIR Table 2 Line 7*)
- Total connected properties at year end, as reported in AIR Table 46 Line 2 (*originally reported in AIR Table 2 Line 1*)

	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14
Properties Affected by Unplanned & Unwarned Interruptions (AIR T46 L7)	1,610	1,676	1,670	767	1,839	2,010	3,675	214,274	765	2,607	1,195
Total Connected Properties (AIR T46 L2 x 1,000)	777,000	779,300	786,128	794,710	800,018	804,418	798,740	806,444	810,367	817,960	824,974
Percentage (AIR T46 L8)	0.21%	0.22%	0.21%	0.10%	0.23%	0.25%	0.46%	26.57%	0.09%	0.32%	0.14%

Percentages are based on the following calculation:

[Line 7 divided by (Line 2 multiplied by 1,000)] multiplied by 100

Atypical performance (2003/04 to 2013/14)

The commentary for AIR14 Table 46 Line 7 identifies atypical performance in 2009/10, 2010/11 and 2012/13 attributed to the following significant freeze/thaw and adverse weather events:

- Freeze/Thaw Event from 24 December 2009 to 21 January 2010
- Adverse Weather Event from 30 March to 5 April 2010
- Freeze/Thaw Event from 8 to 12 December 2010
- Freeze/Thaw Event from 21 December 2010 to 6 January 2011
- Adverse Weather Event from 22 to 27 March 2013

The commentary for AIR14 Table 46 Line 7 also identifies atypical performance attributed to an incident involving a burst 500mm trunk main at Head Road, Kilkeel on 02/02/11 as well as proactive work, new work, human error and other issues unrelated to asset performance.

The following table was first provided for AIR13 and has been updated for AIR14 to provide a quantification of annual performance excluding the impact of:

- significant freeze/thaw and adverse weather events
- the Head Road, Kilkeel incident
- interruptions where the cause was unrelated to equipment failure

	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14
Properties Affected by Unplanned and Unwarned Interruptions (AIR T46 L7)	1,610	1,676	1,670	767	1,839	2,010	3,675	214,274	765	2,607	1,195
09/10 Freeze/Thaw – Frozen Pipes (Removed)	N/A	N/A	N/A	N/A	N/A	N/A	-1,564	N/A	N/A	N/A	N/A
10/11 Freeze/Thaw – Supply Rotation (Removed)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-181,140	N/A	N/A	N/A
10/11 Freeze/Thaw – SR Drain Down (Removed)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-25,439	N/A	N/A	N/A
Actual Dec + Jan Unplanned Interruptions (Removed)	N/A	N/A	N/A	N/A	N/A	N/A	-764	-3,756	N/A	N/A	N/A
Typical Dec + Jan Unplanned Interruptions*	N/A	N/A	N/A	N/A	N/A	N/A	+241	+241	N/A	N/A	N/A
Adverse Weather (Removed)	N/A	N/A	N/A	N/A	N/A	N/A	-300	N/A	N/A	-1,588	N/A
Performance Excluding Significant Freeze/Thaw & Adverse Weather Events	1,610	1,676	1,670	767	1,839	2,010	1,288	4,180	765	1,019	1,195
Total Connected Properties (AIR T46 L2 x 1,000)	777,000	779,300	786,128	794,710	800,018	804,418	798,740	806,444	810,367	817,960	824,974
Performance Excluding Significant Freeze/Thaw & Adverse Weather Events	0.21%	0.22%	0.21%	0.10%	0.23%	0.25%	0.16%	0.52%	0.09%	0.12%	0.14%
Burst 500mm trunk main, Head Road, Kilkeel on 02/02/11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-3,440	N/A	N/A	N/A
Performance following the further exclusion of the Head Road, Kilkeel incident	0.21%	0.22%	0.21%	0.10%	0.23%	0.25%	0.16%	0.09%	0.09%	0.12%	0.14%
Proactive work, new work, human error and other issues unrelated to asset performance**	Not Available				-184	-652	-25	-43	-102	-2	-90
Performance following the further exclusion of interruptions where the cause was unrelated to equipment failure	Not Available				0.21%	0.17%	0.16%	0.09%	0.08%	0.12%	0.13%

*Estimate based on average Dec + Jan unplanned interruptions (07/08, 08/09, 11/12 & 12/13)

**The cause of interruptions was not captured prior to 2007/08

Lines 9 – 12 - Iron at Customer Tap

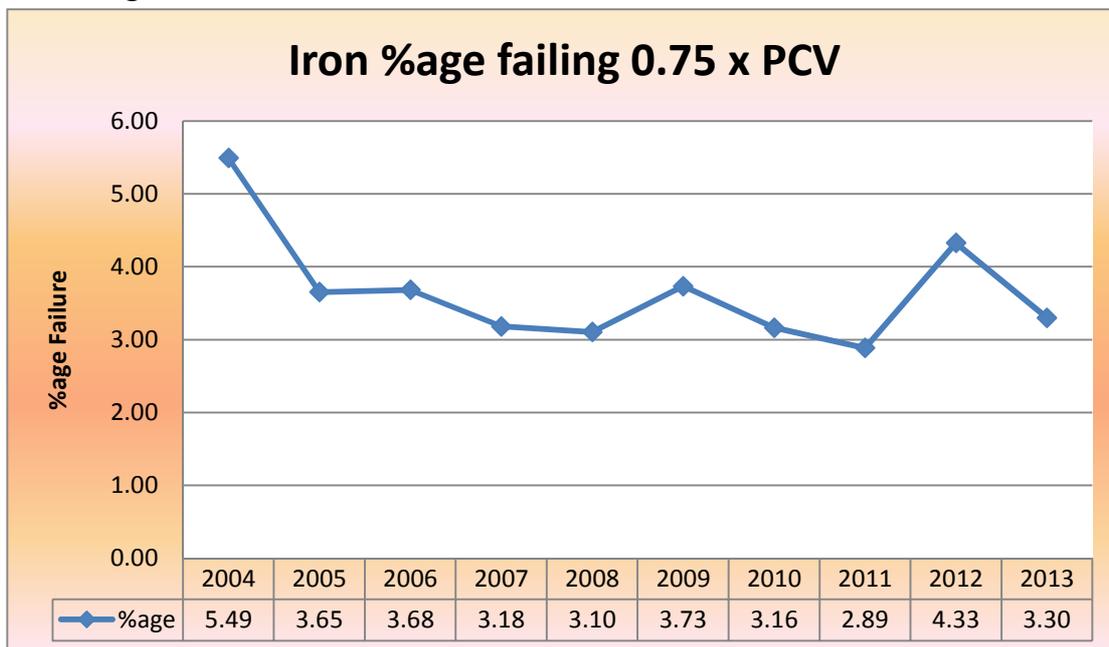
The calculations were carried out using the following data criteria:

- Prior to the calendar year to be tested, NIW determines the boundaries and populations of the water supply zones for that year, and provides a copy of that information to the Drinking Water Inspectorate (DWI).
- Only scheduled audit customer tap samples lifted to meet regulatory requirements from these zones during the calendar year are used, and using accredited laboratory analyses rather than onsite analyses.

Excluded from calculations

There were no zones excluded from the calculations.

Iron %age 0.75 x PCV Exceedance Chart



Line 15 – Distribution losses

Distribution Losses for NI Water are calculated by subtracting Table 10 Line 16 (DSOU) and Table 10 Line 20 (Water Delivered) from Table 10 Line 26 (Distribution Input). Distribution Losses for AIR14 are estimated to be 127.31 MI/d. This is an increase on the AIR13 figure of 115.44 MI/d and primarily due to the reassessment of SPL.

Lines 17 - 20 Turbidity at Water Treatment Works

The calculations were carried out 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.

NIW v PPP

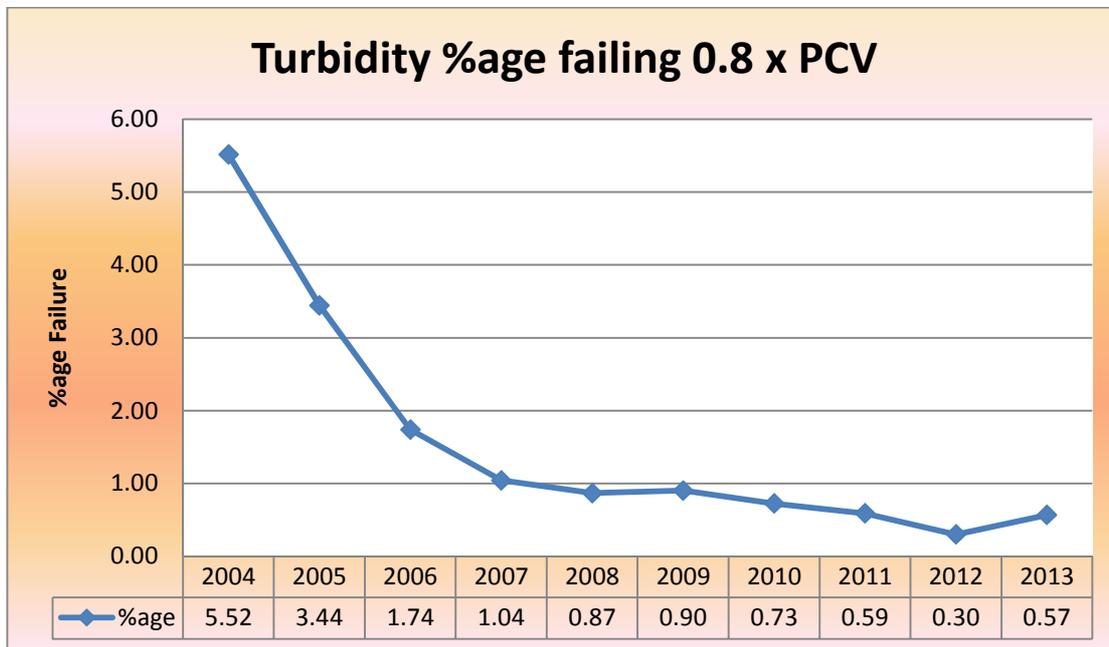
No WTWs were excluded, however whilst the return shows all relevant turbidity results, much of NIW’s water is produced by PPP concessionaires. The breakdown of numbers between NIW and PPP is shown in the table below.

Year	2007	2008	2009	2010	2011	2012	2013
All	9482	8964	7749	7561	6928	6638	6617
>PCV	52	45	47	35	32	12	18
0.8	99	78	70	55	41	20	38

NIW	9482	8728	5925	5737	5103	4813	4792
>PCV	52	45	44	34	31	12	14
0.8	99	78	67	54	40	20	34

PPP	0	236	1825	1825	1825	1825	1825
>PCV	0	0	3	1	1	0	4
0.8	0	0	3	1	1	0	4

Combined WTW Turbidity %age 0.8 x PCV Exceedances Chart



Lines 21 - 24 Total Trihalomethanes at Customer Tap

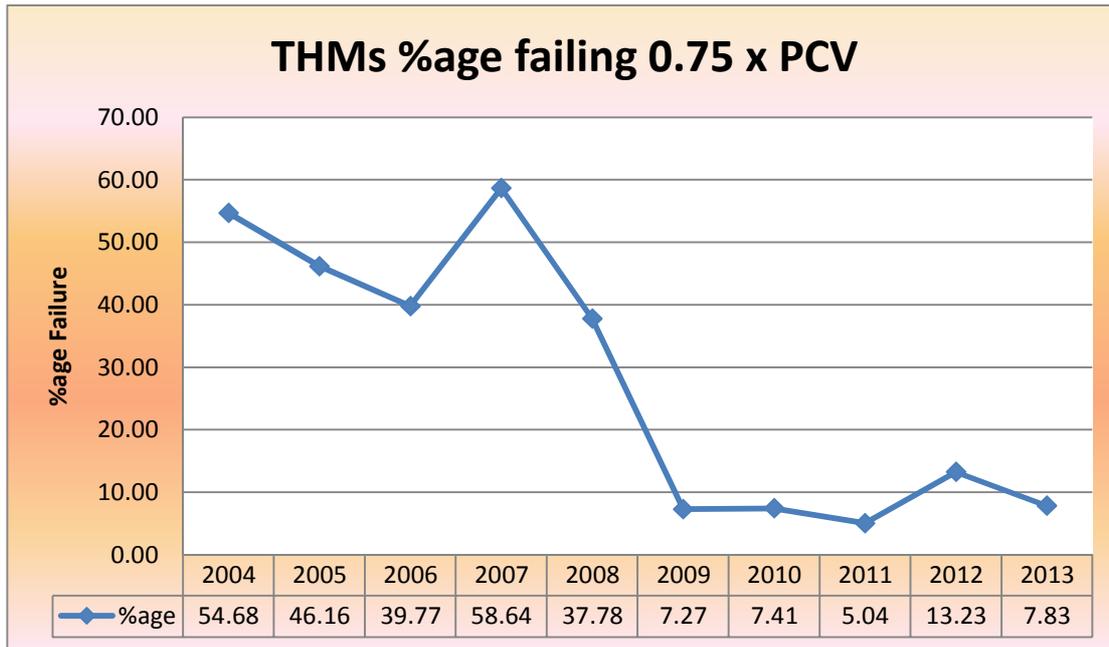
The calculations were carried out using the following data criteria:

- Prior to the calendar year to be tested, NIW determines the boundaries and populations of the water supply zones for that year, and provides a copy of that information to the Drinking Water Inspectorate (DWI).
- Only scheduled audit customer tap samples lifted to meet regulatory requirements from these zones during the calendar year are used, and using accredited laboratory analyses rather than onsite analyses.

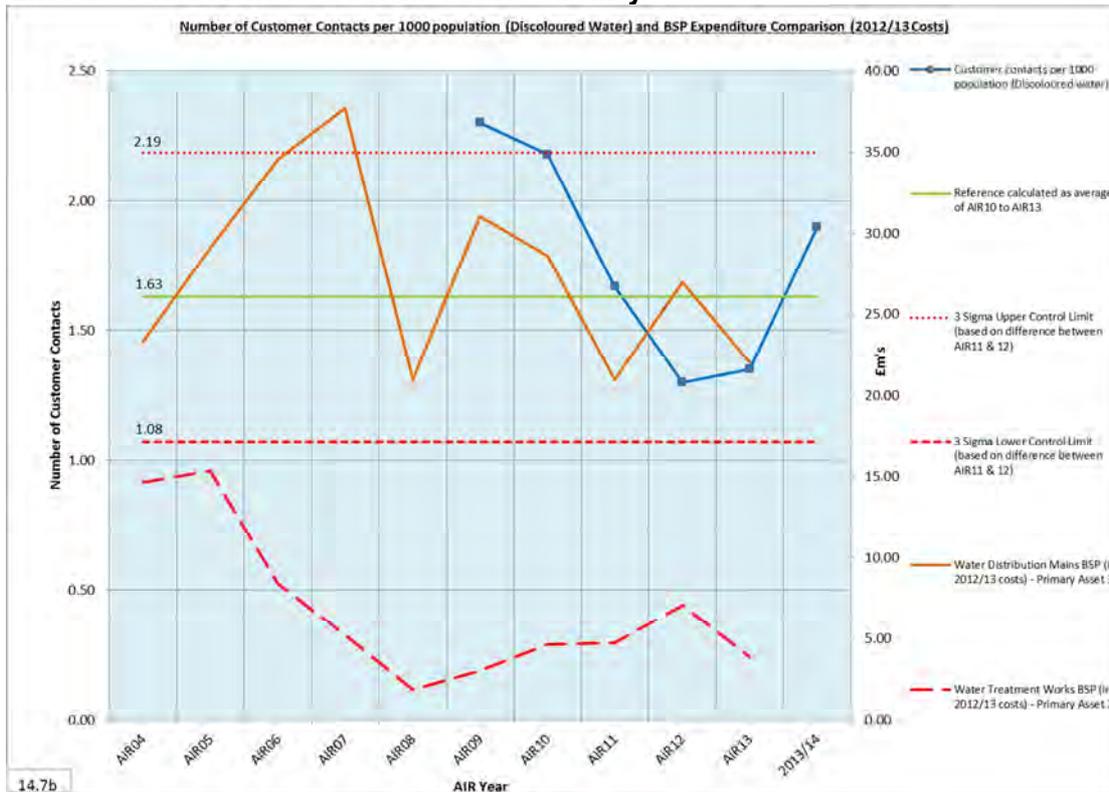
Excluded from calculations

There were no zones excluded from the calculations

Total Trihalomethanes %age 0.75 X PCV Exceedances Chart



Line 16 - Water Infra overall Serviceability



Lines 26 – 28 - Coliform bacteria at Service Reservoirs

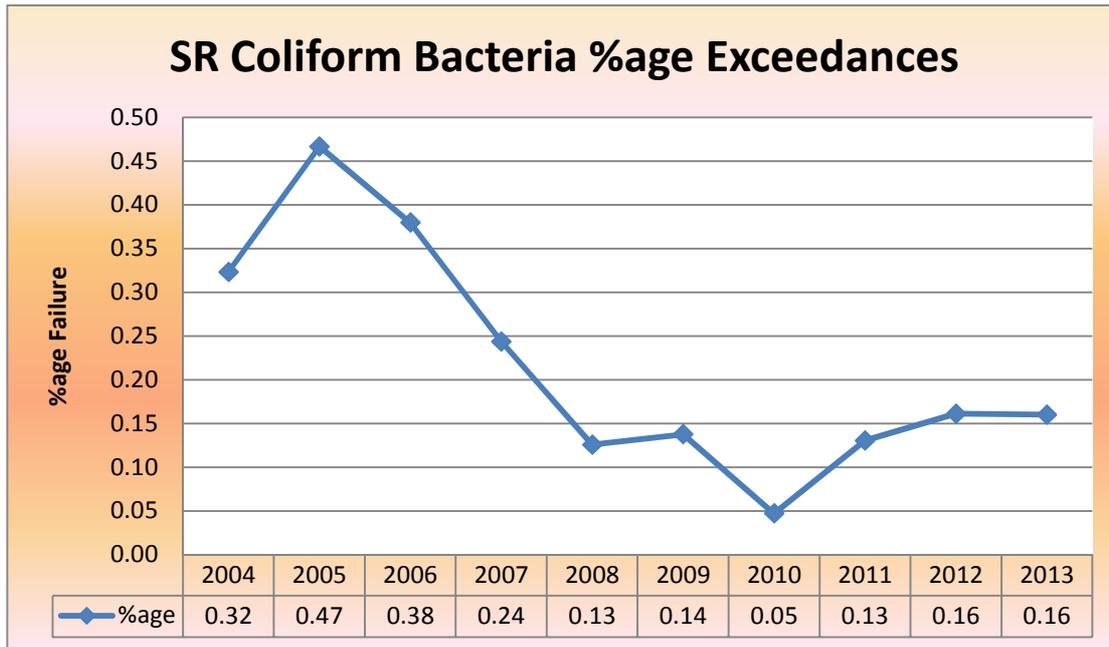
The calculations were carried out using the following data criteria:

- Only scheduled audit service reservoir samples lifted to meet Water Supply regulatory requirements during the calendar year were used, and using accredited laboratory analyses rather than onsite analyses.

Excluded from calculations

There were no SRs excluded from the calculations.

Service Reservoirs Coliform Bacteria %age Exceedances Chart



Line 29 - Unplanned (reactive) maintenance

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 and although the principle of operation has already been proven through the development of M&E Out-of-Service databases for some equipment.

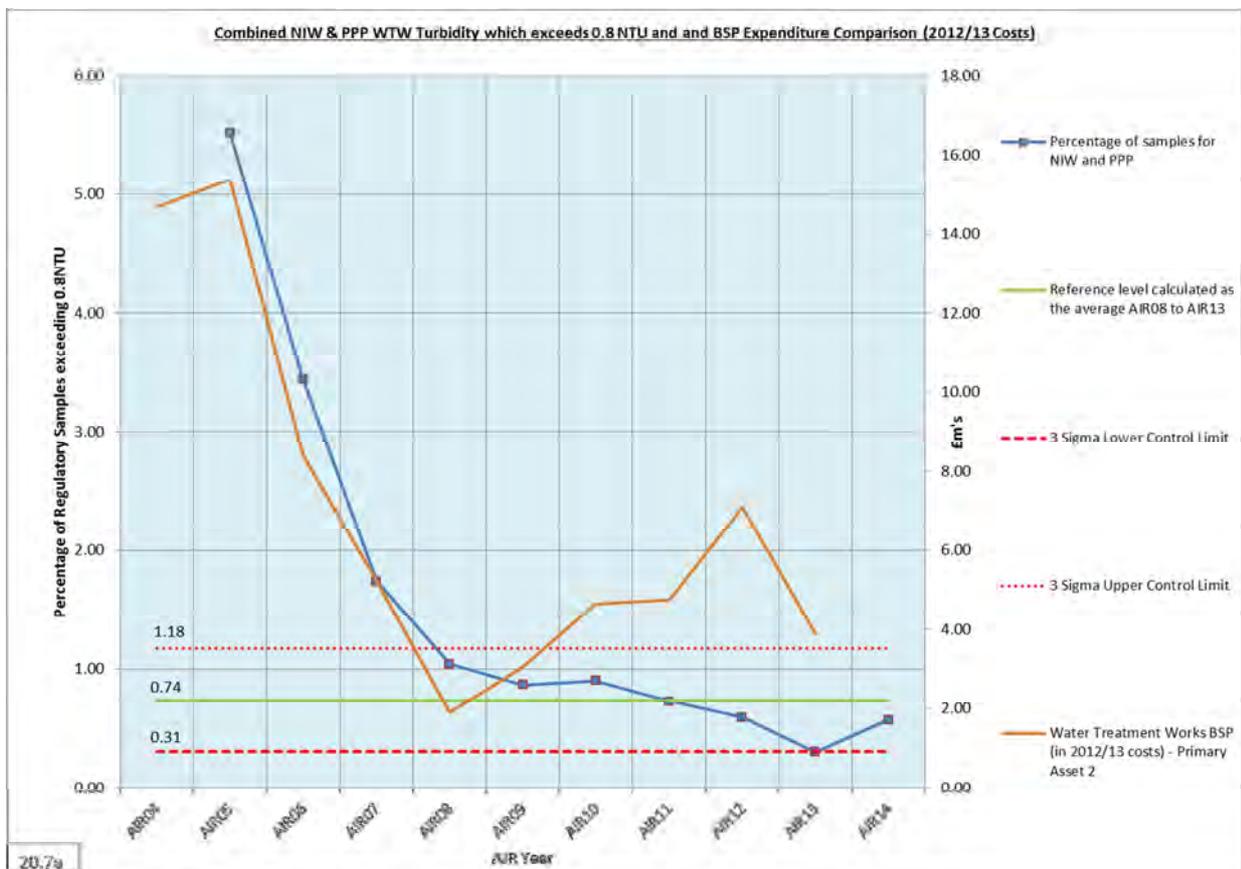
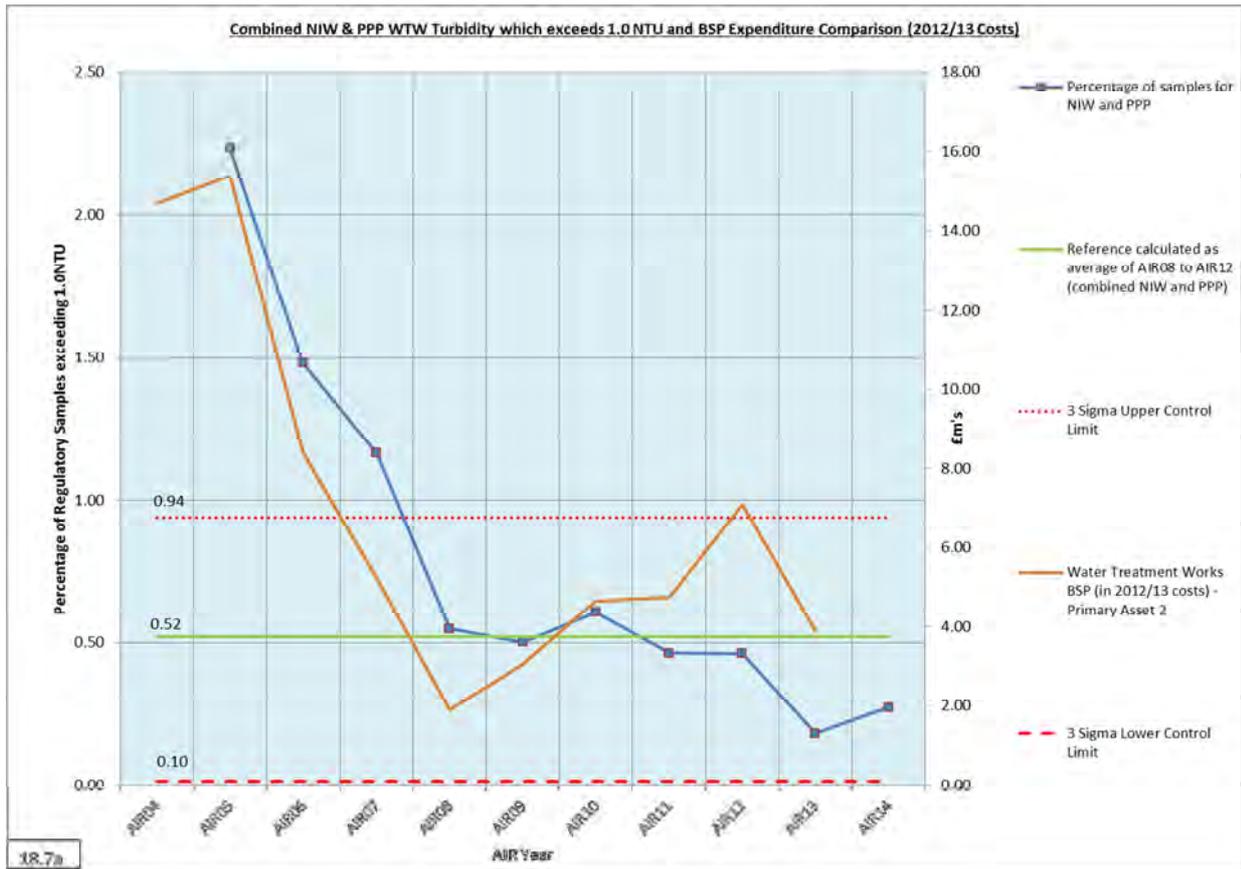
The return has been allocated a confidence grading of B2. This is due to the main factors listed;

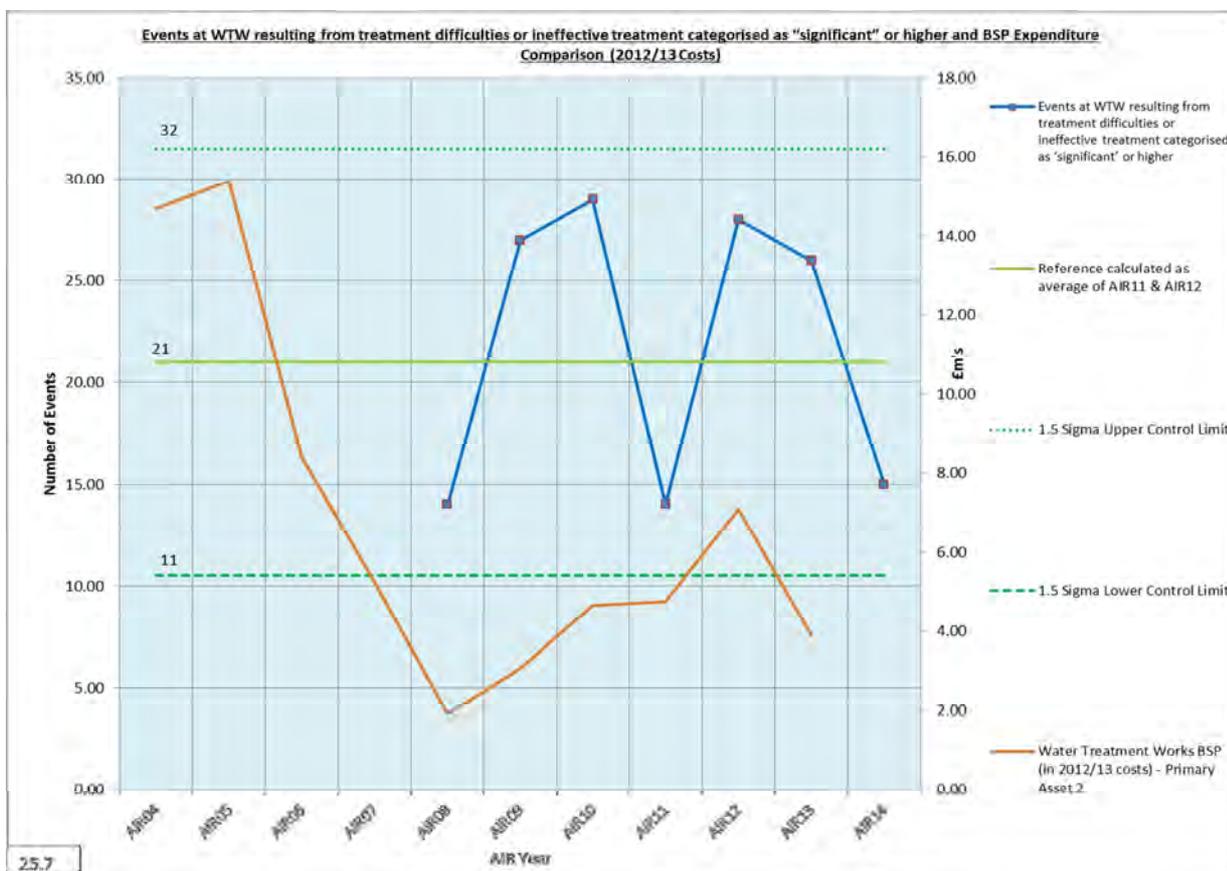
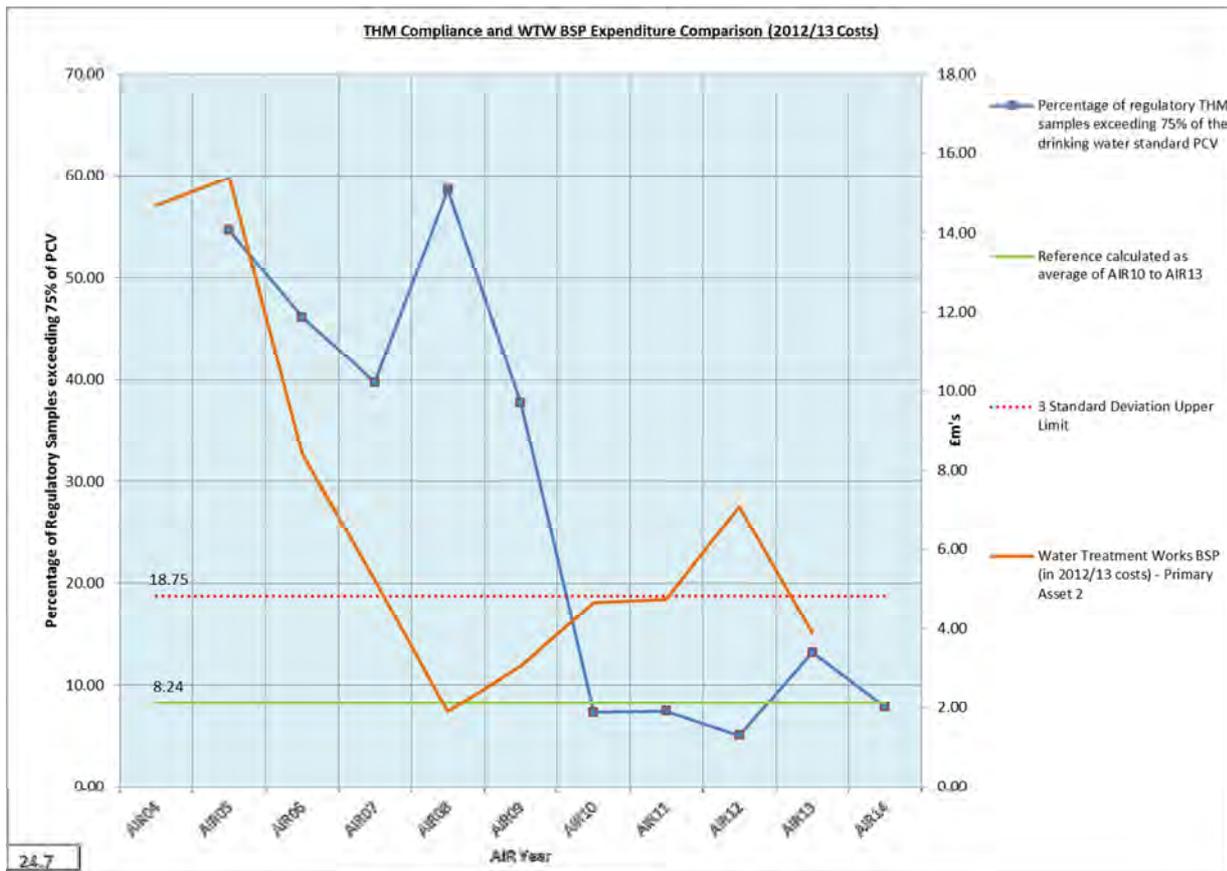
- Telemetry signal anomalies and errors can adversely affect the data for individual items of equipment.
- Equipment which is registered as “tripped in auto”, “in hand” or “tripped in hand” is generally deemed to be unavailable. However those assets which are only operated in a manual capacity i.e. always “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 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.

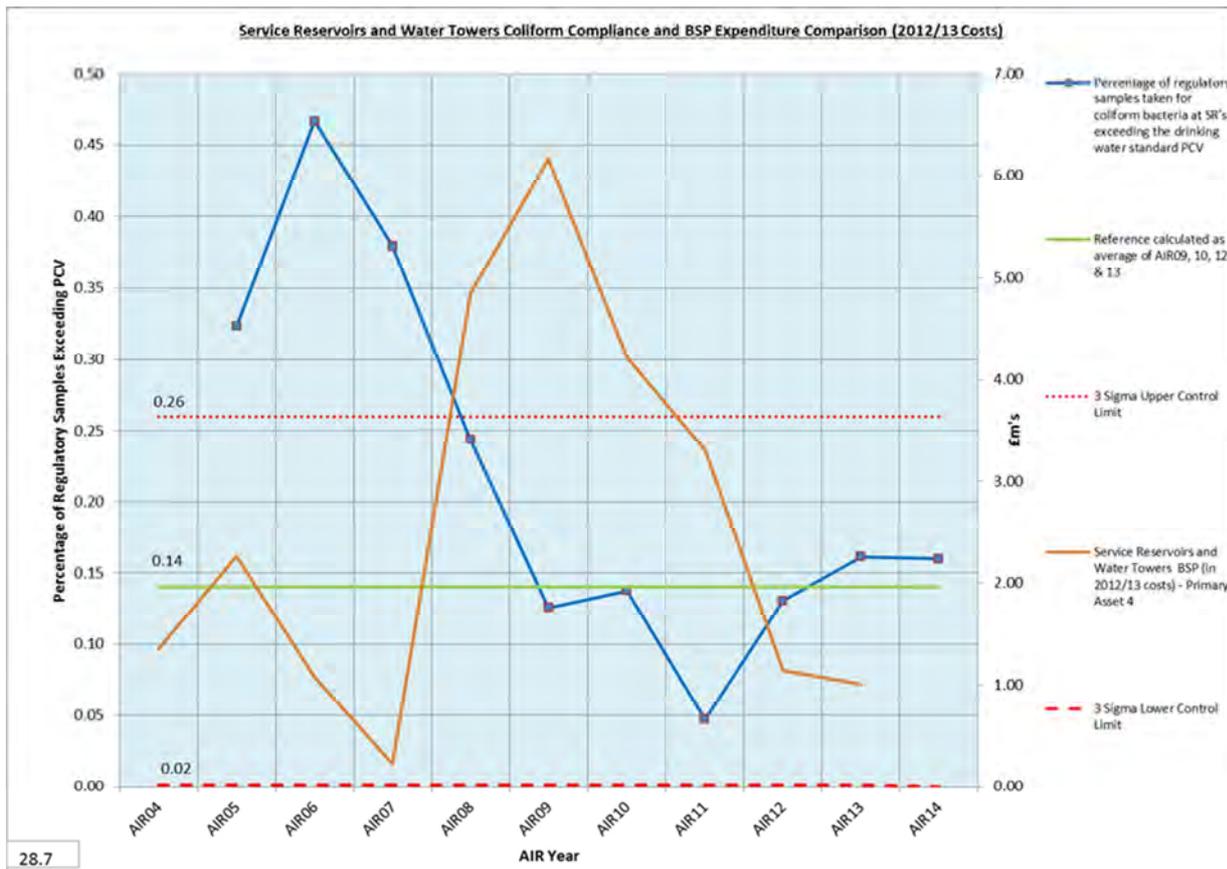
Line 30 – Company’s overall serviceability assessment for water non-infrastructure

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, are all within the control limits based on the latest AIR14 information.

This can be seen in the serviceability graphs below:







Line 31 – Total length of sewers

The structure of the sewer data has been updated this year to align the ownership attributes for sewers to the same structure used for the water mains data. This change of structure has not affected the totals provided and the query used to extract the data from the Corporate Asset Register has been modified to reflect the changes. 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.

Lines 32, 33, 34, 35, 36, 37, 40, 43 & 44

Calculation Process

Data gathering and calculation is as described below.

The data required for table 46

Line 32 – Total number of Rising Main Failures

Line 33 – Total number of Gravity Sewer Collapses

Line 34 – Total number of Sewer Collapses

Line 35 – Sewer collapses per 1,000km

Line 36 – Total number of Sewer Blockages

Line 37 – Sewer blockages per 1,000km

Line 40 – Properties flooded in the year (other causes)

Line 43 – Number of pumping station emergency overflows triggered by equipment failure

Line 44 – Number of sewer repairs

is gathered by Wastewater Networks Field managers using checked and paid invoices from the Sewer Maintenance Contractor and submitted through their line management (Area Managers), for quality control on an excel spreadsheet to WW Business Unit on a

monthly basis. This information per area is automatically transferred to a composite Excel spread sheet to enable the information to be presented in the format as required for the AIR14 return.

Because of the nature of the collecting of the information for lines 32, 33, 36 and 44 the data for these lines is purely input and not calculated.

Changes during report year

Work has progressed during the year to identify critical and lateral sewers these layers have been added to NIW's Corporate Asset Register. During this reporting period as per reporters recommendation no.7 NIW has investigated the high numbers of sewer blockages, this figure includes blockages in the main sewers and the lateral sewers yet the total length of sewers figure reported in Table 16 Line 14 relates to main sewers only. NIW has developed a method of estimating the length of lateral sewers (A recent exercise was carried out using geospatial technology to create logical lateral sewers from properties to the sewer collection system this equates to an extra 2155km. These have not been included in the total provided. A full methodology can be obtained from Asset Information Development if required.) See Table 16 Line 14 Methodology Assumptions and Exclusions.

NIW are now being more proactive in their approach to repeat blockages. NIW Customer Field Managers (CFM) now have the resource of designated field technicians who are carrying out CCTV investigations on sewers which have repeat blockage complaints any faults found have been remedied thus reducing the number of repeat incidents.

As result of further refinement at NIW's request the contractor now (end of March 2014) 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 AIR15 to report on whether collapses or blockages have occurred in a private lateral, public lateral or public main sewer.

Lines 38 and 39 – Sewerage Infrastructure

Lines 46 – 52 – Sewerage Non-Infrastructure

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, with WOC conditions 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 2013 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 14

1. The most significant change in compiling AIR 14 data is that the base for the WWTW in service now 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 12 Return. These same PE's were also used to calculate the number of audit samples required per site for the 2013 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 14 contains a number of works which have crossed sampling thresholds. Table 1, which indicates the sampling frequencies associated with WWTW PE's, is provided overleaf.

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	48

If the PE of a WWTW causes a decrease 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 below.

Table 2 – Sampling Frequency Threshold Changes

Works Name	PE used in AIR14	PE Supplied by Asset Management	Threshold Being Crossed
Ballymena	113,825	80,361	100,000
Coalisland	12095	9929	10,000
Dunmurry	53,605	45,798	50,000
Moy	5,084	3,206	5,000

The 2012 sample scheduling PE data, which was agreed with NIEA in November 2011, has been applied to the works in Table 2.

5. Only the resident PE is included in the compliance assessment i.e. tourist/visitors are not included in the total PE for Line 47.
6. Only NI Water operated WWTW are included in assessment.

How the compliance is measured

Lines 38 and 39 - Number of High (H), Medium (M) and Low (L) pollution incidents from the sewer network

The figures reported have been audited by NIEA and are reported on calendar year performance. They were obtained from the NIEA Audit document which can be found in Sharepoint at –

Asset Management / Environmental Regulation / Wastewater and Waste / Enforcement / Pollution Incidents / 2013 / NIEA Audits / NIWL Audit 2013 Jan to Dec Inc _v2

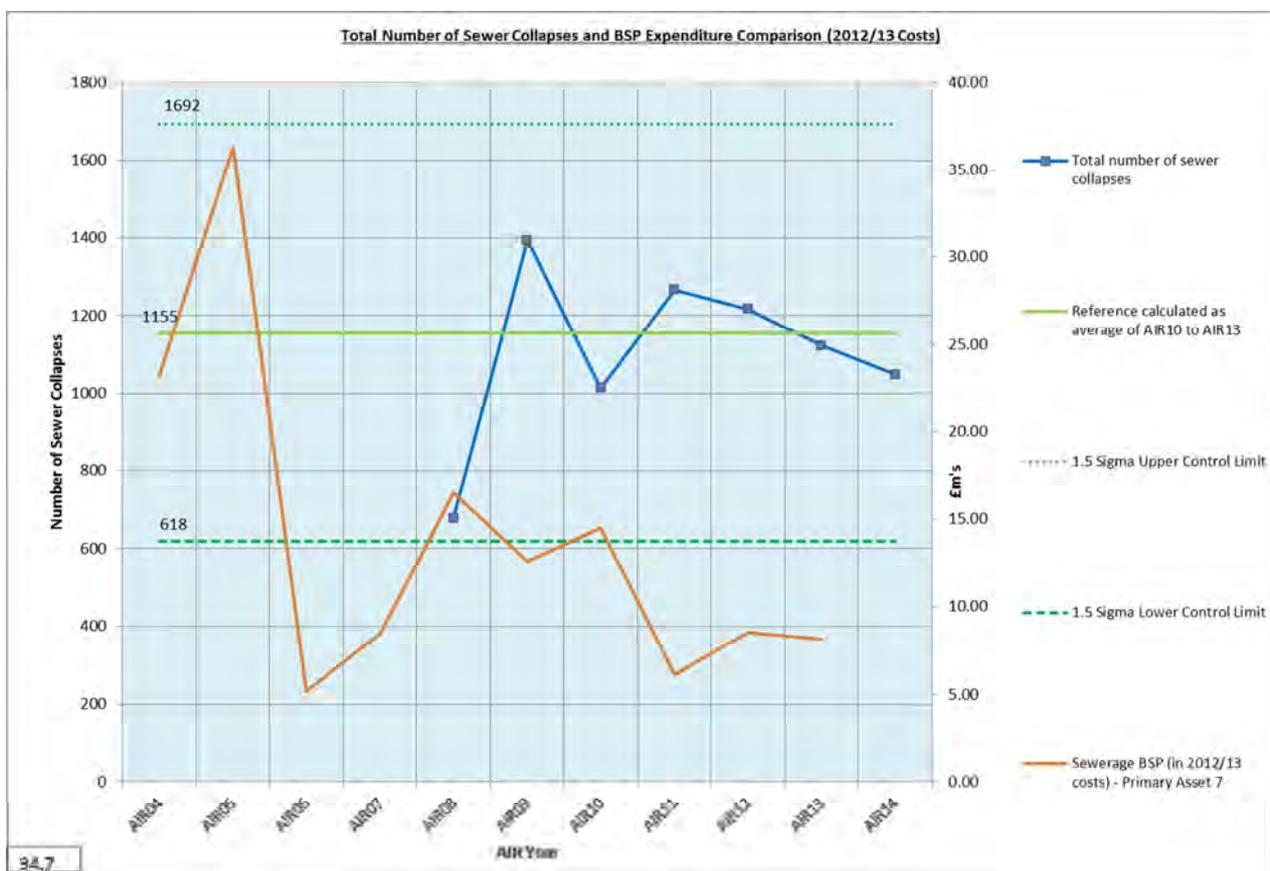
NIEA Classification of Pollution Incidents in 2013

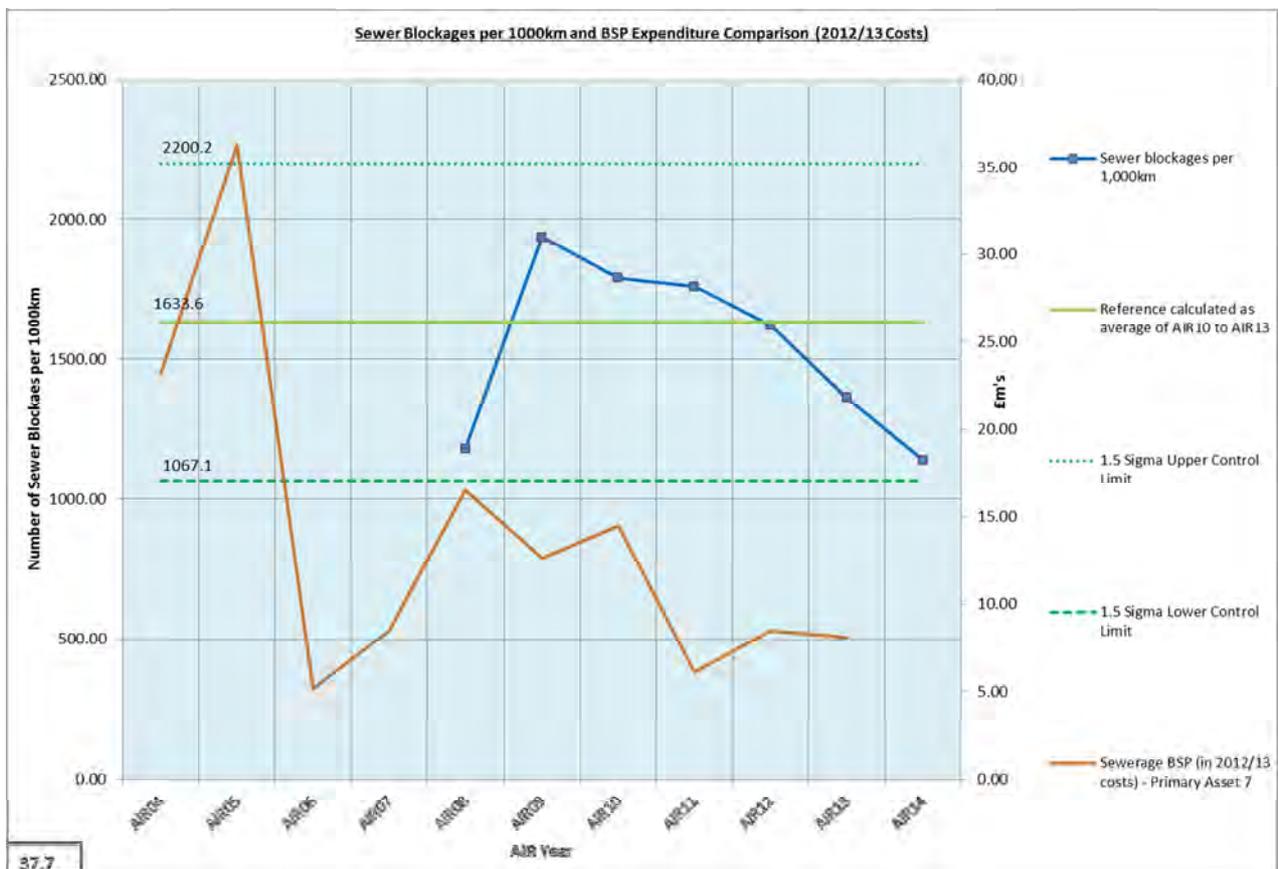
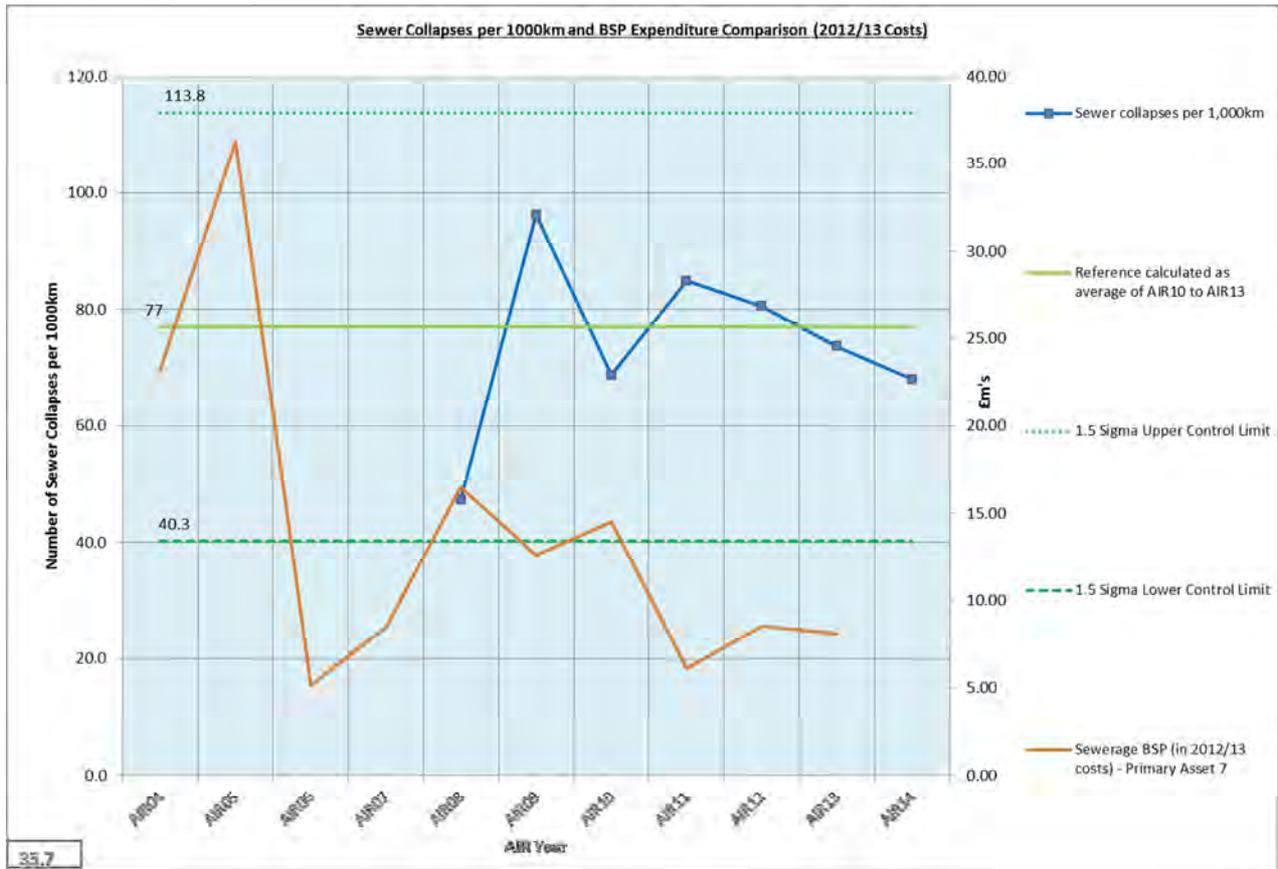
Classification	CSO/Sewers/WwPS	WWTW	WTW/Distribution	Total
L	149	39	0	188
H/M	14	12	0	26
Total H/M/L	163	51	0	214

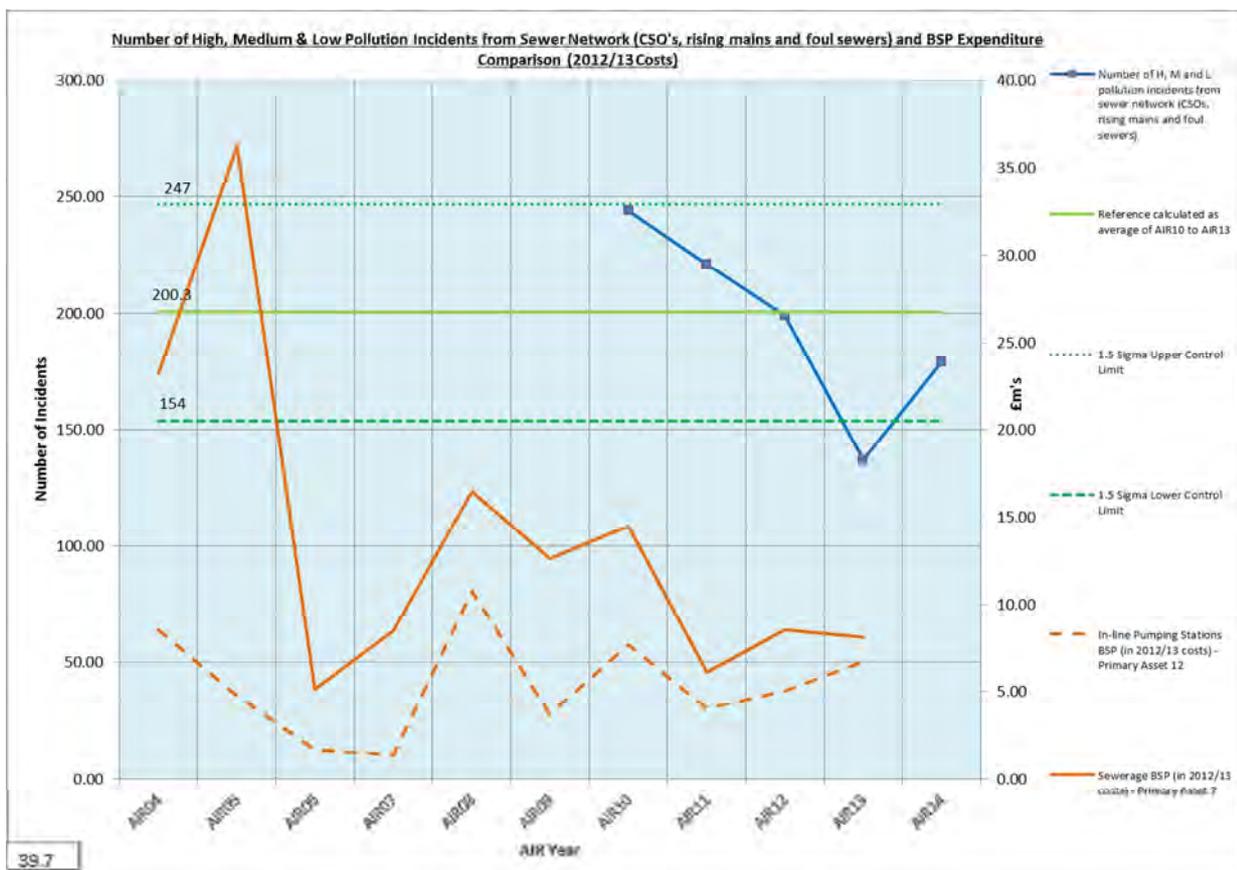
Line 45 – Company’s overall serviceability assessment for sewerage infrastructure

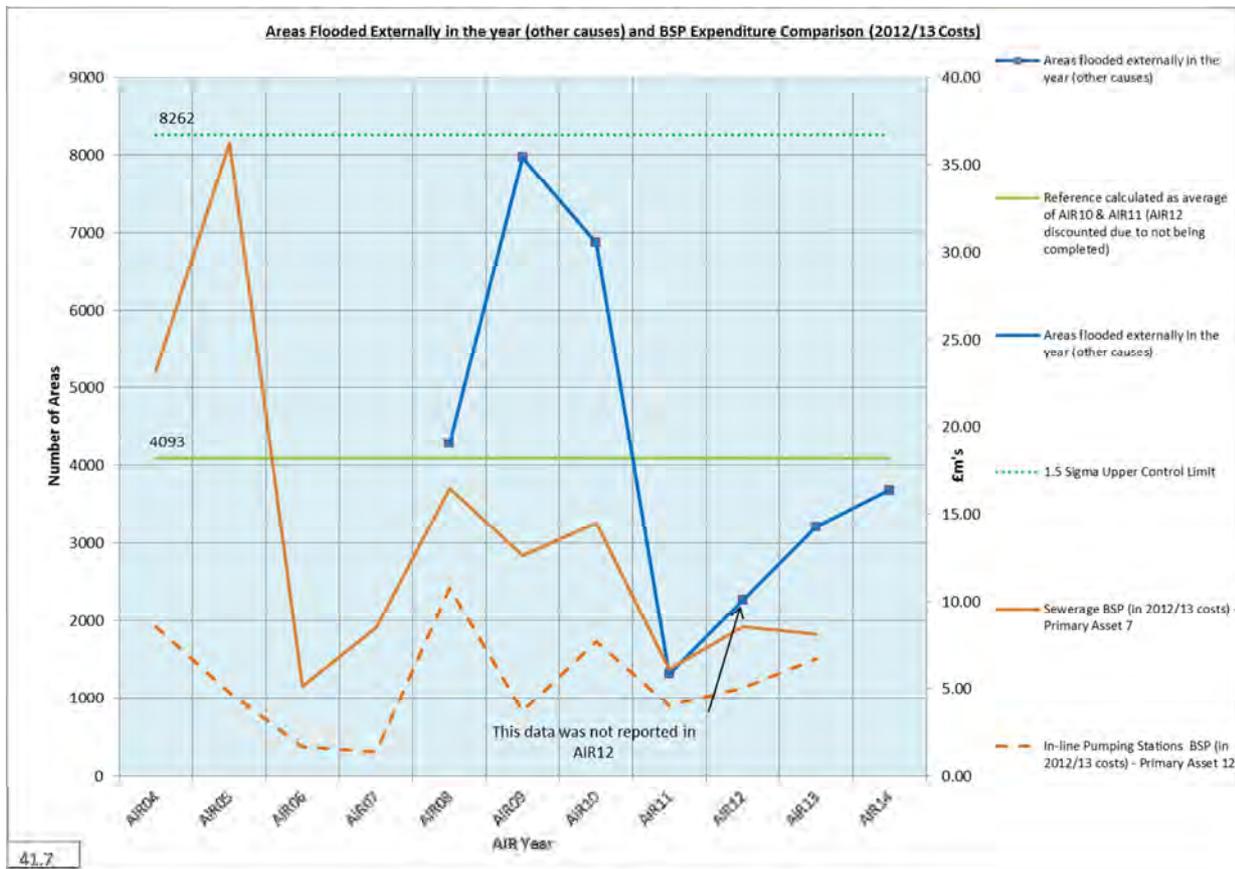
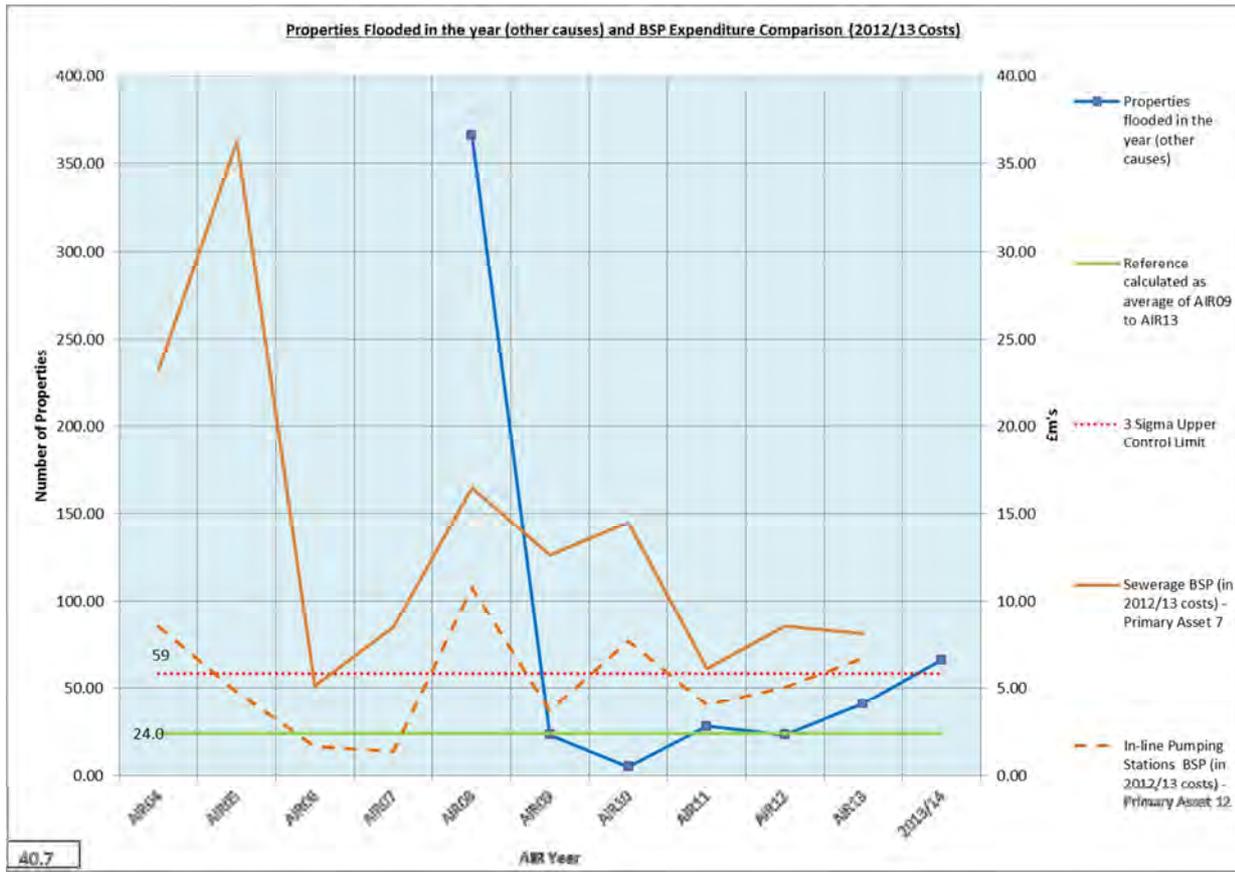
The serviceability assessment has been designated as Stable as the trend analysis associated with the basket of serviceability indicators, used to assess serviceability for sewerage infrastructure, are all within the control limits, based on the latest AIR14 information.

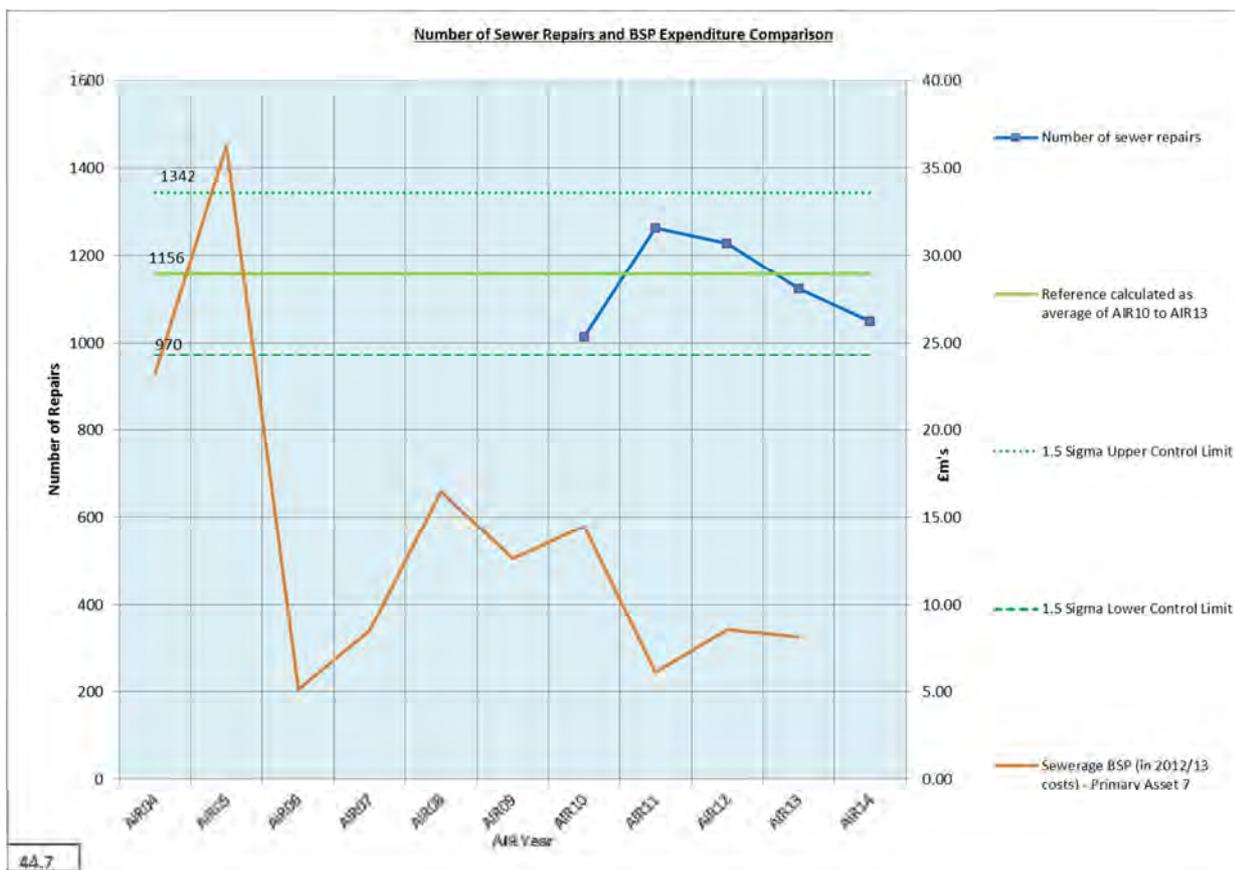
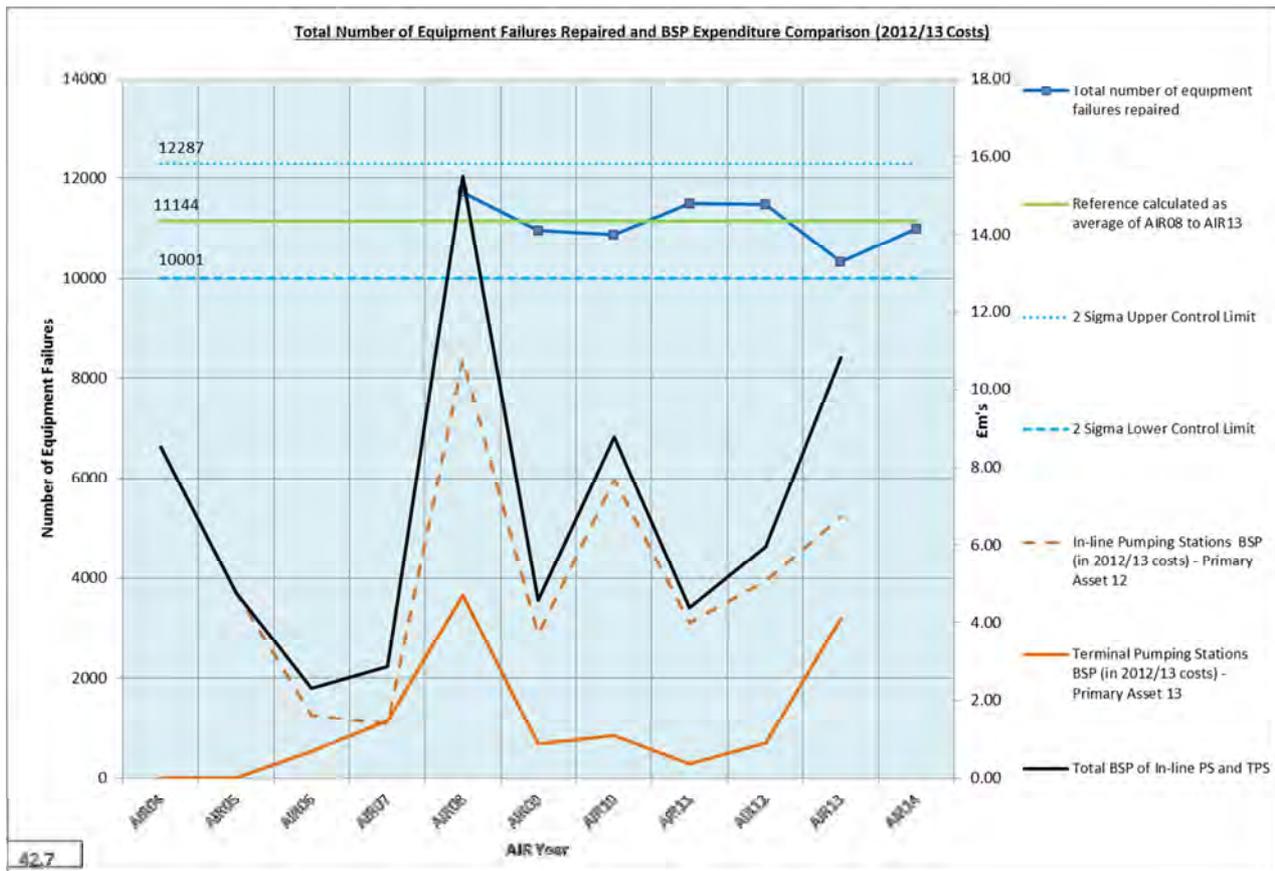
Wastewater Infra











Line 46 – Percentage of WWTW discharges not 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 (NH₄). 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 46 Calculations – Taken from AIR 14 Calculation Spreadsheet

No. of NI Water Only WWTW’s = 231
 No. of failing NI Water Only works = 19
 No. of passing NI Water Only works = 212

$19/231 \times 100 = 8.23\%$
 Reported to one decimal place = **8.2%**

Line 47 – Percentage of Total PE Served by WWTW’s Not Compliant With Numeric Consents

The PE served by non-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 47 Calculations – Taken from AIR 14 Calculation Spreadsheet

PE of failing NI Water Only works = 97132
 Total PE of NI Water Only works = 1776174
 PE of passing NI Water Only works = 1679042

$97132 / 1776174 \times 100 = 5.47\%$

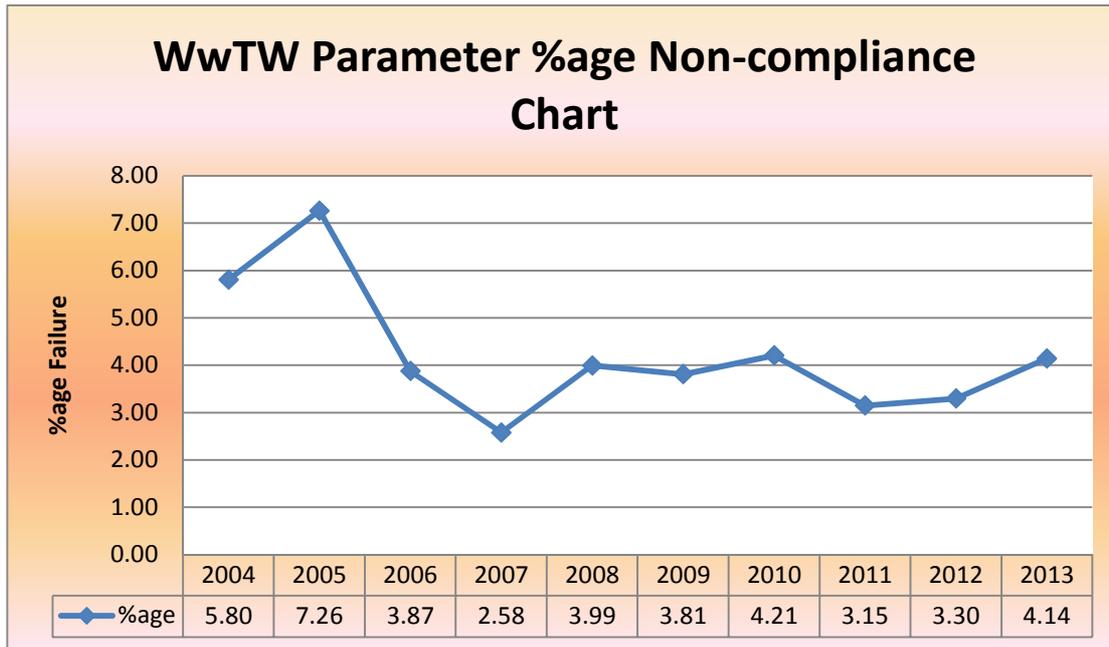
Lines 48-51 WWTW Parameter Non-Compliance

The methodology for statistical calculations produced involved the use of the analytical results that are used for reporting to the Environmental Regulator. These samples are held in NI Water’s LIMS (Laboratory Information Management System) and are representative, scheduled audit samples. No operational results were used for calculations.

The calculation for the AIR14 submission has been changed to exclude audit samples which had a population equivalent less than 250, and those ammonia tests which although the site had a Water Order Consent, there was no ammonia consent. The previous years’ numbers have been recalculated as below.

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Count	11,234	11,251	11,461	11,524	9,088	8,747	8,585	8,863	9,161	8,938
> Consent	652	817	444	297	363	333	361	279	302	370
% Non-Compliance	5.80	7.26	3.87	2.58	3.99	3.81	4.21	3.15	3.30	4.14

WwTW Parameter %age Non-compliance Chart



Roles and Responsibilities in Production of Compliance Statistics

The relevant personnel and contact numbers are given in Appendix 3. Contact numbers for NIEA staff are also included.

LIMS Manager/Deputy

In conjunction with the Waste Water Manager:

- Obtain PE figures from the Asset Management section in October each year and agree with NIEA by November.
- Agree the WWTW to be considered for compliance assessment and sampling schedule with NIEA in November for the following year.

Sole responsibility

- Liaise with the Laboratory Sampling Manager/Deputy in scheduling samples.
- Review standards within LIMS as instructed by the Wastewater Regulation Manager.
- Amend standards within LIMS in response to Interim Time Banded Standards (ITBS) as instructed by the Wastewater Regulation Manager.
- Liaison with Sampling Manager/NIEA on rescheduling in all instances where either spot or composite samples are not taken as scheduled.
- Activate automatic samplers for collection of UWWTR composite samples.
- Liaison with Sampling Manager and Wastewater Services scientific staff where samplers fail to operate.

Wastewater Regulation Manager/Deputy

- Joint assessment with the LIMS Manager of PE's and WWTW for compliance assessment and sample scheduling.
- Submit applications for Interim Time Bounded Standards in a timely manner to ensure the standards are in place prior to the commencement of a Capital Works project.
- Submit applications for sample discounts within the 15 day timescale set by NIEA.

- Liaise with Wastewater Services staff on ITBS applications and discounting of samples.
- Liaise with the LIMS Manager/Deputy on updating standards/discounts as received from NIEA.
- On a monthly basis, from March onwards, produce compliance data on the basis of the methodology outlined previously to meet the timeframe of the KPI, Board and CSDD/MT reports.
- Liaise with Wastewater Services staff on a monthly basis to agree compliance figures.
- Produce the end of year compliance figures by the end of February the following year.
- In conjunction with NIEA, cross check on the WWTW standards prior to the start of each calendar year.
- Review procedures prior to commencement of each calendar year.

Head of Environmental Regulation

- Audit the compliance figures as produced by the Wastewater Regulation Manager prior to submission.
- Liaise with the Head of Wastewater Services on general compliance issues.
- Liaise with the Head of Wastewater services on setting KPI targets.

APPENDIX 1**Table 3 – Permitted Exceedances**

No of Samples	Permitted Exceedances
4-7	1
8-16	2
17-28	3
29-40	4
41-53	5

APPENDIX 2**NORMAL OPERATING CONDITIONS UNUSUAL SITUATIONS AND NORMAL LOCAL CLIMATIC CONDITIONS****1. THE REGULATIONS' TERMINOLOGY**

1.1 The term "normal operating conditions" is used in paragraph 4(b) of Part II of Schedule 3; the phrase "unusual situations such as those due to heavy rain" is used in paragraph 5 of Part II of Schedule 3; "normal local climatic conditions" are referred to in regulation 4(4)(a).

2. INTERPRETATION

2.1 In order to assist in interpreting the weather conditions that might be considered to be abnormal or unusual, a definition of exceptional weather conditions is given below, together with an example of what might be considered to be other kinds of abnormal or unusual operating conditions.

2.2 The abnormal conditions set out below include capital works construction and periods of industrial action. Both are being considered by the Regulatory Committee, along with other possible exceptions suggested by other Member States. An amendment to this guidance note will be issued in the light of any guidance from the Regulatory Committee.

2.3 Definitions

2.3.1 For the purpose of this *registered standard / consent* the works shall be deemed to have been under 'normal operating conditions' except during a period when the following apply:

- a. 'Unusual weather conditions' which shall include the following:
 - i) low ambient temperature as evidenced by effluent temperature of 5°C or less, or by the freezing of mechanical equipment in the works;
 - ii) significant snow deposits;
 - iii) fluvial flooding;
 - iv) weather conditions causing unforeseen loss of power to the works which could not be ameliorated by the reasonable provision and operation of standby generator facilities.
- b. A reduction in the level of treatment due to periods of industrial action or acts of vandalism that could not have been reasonably prevented.
- c. When the Regulator has issued a variation of the registered standard for reasons such as construction of capital works.

**APPENDIX 3
CONTACT DETAILS****Head of Environmental Regulation**

[REDACTED]

Wastewater Regulation Manager

[REDACTED]

Wastewater Regulation Deputy

[REDACTED]

LIMS Manager

[REDACTED]

LIMS Deputy

[REDACTED]

NIEA CONTACTS

[REDACTED]

Line 42 - Total number of equipment failures**Reporting Restrictions**

The MWM records do not incorporate instances of non-electromechanical devices such as storage tanks or hydrobrakes.

The failure of a pump, for example, on MWM will be recorded but not the outcome associated with this failure. It is therefore not possible to identify in isolation those equipment failures which resulted in “a detrimental impact on service to customers or the environment” since the vast majority of pumping stations possess an acceptable level of redundancy which mitigates the impact of failure on the customer.

These figures need not relate directly to equipment failures associated with M&E Services. In the vast majority of cases, for example, in SPS jobs the attendance is due to unblocking of pumpsets rather than pumpset failure. There is therefore a danger that the figures are incorrectly perceived as M&E equipment failures rather than as a result of external circumstances e.g. flash-flooding leading to blockages.

The return has been allocated a confidence grading of B2. This is due to two main factors i.e.

- Data is manually filtered to remove duplicate entries associated with “two-man” jobs. Given the manual element of this exercise there is some potential for error and
- Out of hours work may not all be captured using the current system which relies on all jobs being recorded on the MWM system. Given the company’s current operating model this does not occur in all instances.

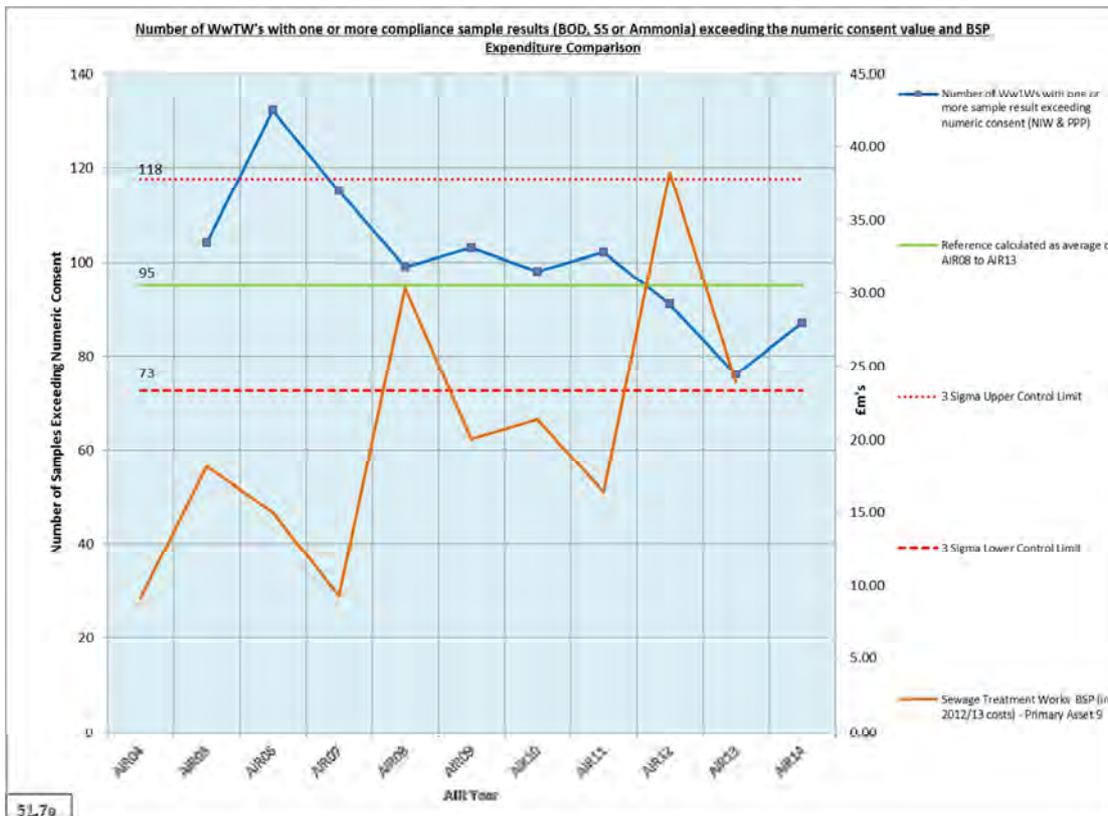
Line 53 - Unplanned (reactive) maintenance

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 and although 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 main factors listed;

- Telemetry signal anomalies and errors can adversely affect the data for individual items of equipment.
- Equipment which is registered as “tripped in auto”, “in hand” or “tripped in hand” is generally deemed to be unavailable. However those assets which 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 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.





Annual Information Return 2014

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 2014: 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.

2. Extract from DG2 register

UPRN	Status Date	Status	Building Nr	Primary_Thorfare	Town	Postcode	County	DMA	Pressure
187100513	30-Nov-12	In Register	█	█	█	█	Down	Sentry Hill	13.47
185292371	30-Sep-12	In Register	█	█	█	█	Down	Loughrans Tower	14.97
185292234	30-Sep-12	In Register	█	█	█	█	Down	Loughrans Tower	13.87
185292230	30-Sep-12	In Register	█	█	█	█	Down	Loughrans Tower	14.12
185290343	30-Sep-12	In Register	█	█	█	█	Down	Sentry Hill	13.07
185778557	30-Sep-12	In Register	█	█	█	█	Down	Loughrans Tower	14.79
185292251	30-Sep-12	In Register	█	█	█	█	Down	Loughrans Tower	13.90
185292239	30-Sep-12	In Register	█	█	█	█	Down	Loughrans Tower	14.01
185292245	30-Sep-12	In Register	█	█	█	█	Down	Loughrans Tower	13.82
185292368	30-Sep-12	In Register	█	█	█	█	Down	Loughrans Tower	14.71
185292366	30-Sep-12	In Register	█	█	█	█	Down	Loughrans Tower	14.86
185292364	30-Sep-12	In Register	█	█	█	█	Down	Loughrans Tower	14.89
185292362	30-Sep-12	In Register	█	█	█	█	Down	Loughrans Tower	14.95
185292259	30-Sep-12	In Register	█	█	█	█	Down	Loughrans Tower	14.06
185292258	30-Sep-12	In Register	█	█	█	█	Down	Loughrans Tower	13.82
185292257	30-Sep-12	In Register	█	█	█	█	Down	Loughrans Tower	13.89
185207712	31-Aug-12	In Register	█	█	█	█	Down	Portavoe Donaghadee	7.94
185207711	31-Aug-12	In Register	█	█	█	█	Down	Portavoe Donaghadee	8.07
185207710	31-Aug-12	In Register	█	█	█	█	Down	Portavoe Donaghadee	8.44
185207709	31-Aug-12	In Register	█	█	█	█	Down	Portavoe Donaghadee	8.65
185207714	31-Aug-12	In Register	█	█	█	█	Down	Portavoe Donaghadee	7.51
185207715	31-Aug-12	In Register	█	█	█	█	Down	Portavoe Donaghadee	7.43

3. Sources of information

For AIR14 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 2012/13 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 AIR14 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

Level of Service Methodology

DG3 Supply Interruptions

This document has been laid out as follows:

- 1.0 Objective & Aim**
- 2.0 Reporting Requirements**
- 3.0 Definitions**
- 4.0 Procedure**
- 5.0 Records**
- 6.0 Reporting**
- 7.0 Void Properties**
- 8.0 'No Water/Low Pressure' Complaints**

Appendix A – Roles and Responsibilities

Appendix B – Process Flow Diagram – Unplanned Interruptions

Appendix C – Process Flow Diagram – Planned Interruptions

Appendix D – Pro forma - Interruption Information Sheet

Appendix E – Pointer 2.1 Specification Extracts

Appendix F – CRC Call Scripts for 'No Water/Low Pressure' Complaints

Appendix G – DG3 Register Extract

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 Register is compiled and held by Customer Systems 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	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 caused by third parties
14	More than 6 hours caused by third parties
15	More than 12 hours caused by third parties
16	More than 24 hours caused by third parties
17	More than 6 hours unplanned (overruns of planned interruptions)
18	More than 12 hours unplanned (overruns of planned interruptions)
19	More than 24 hours unplanned (overruns of planned interruptions)

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 third party interruptions; or 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 2010, Issue 1.0 – March 2001.

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 reclassified 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 reclassified 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-classified 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 which 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 the 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 Engineering Procurement (EP) 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 collection and recording all appropriate information to be included in the DG3 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 then the card drop operation starts at 9.00am and finishes at say 2.00pm, the warning period starts at 2.00pm, on say, 2nd July for 48 hours. 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 pro forma sheet (see Appendix D). The pro forma sheet contains the raw data associated with the interruption and is taken to an appropriate computer workstation for input into OMIS. These pro forma sheets must be kept for audit purposes.

The Networks Water or Leakage Services Field Manager responsible for the planned works is required to ensure that all relevant information is input to the OMIS Interruption Reporting System and all documentation is retained for audit purposes.

Details of the OMIS input sheet and the OMIS user guide can currently be obtained from Customer Systems in Capital House.

4.3 Planned interruptions carried out by EP or Customer Field Services.

EP and Customer Field Services use a combination of an Interruption Pro forma and an Excel spreadsheet. An appropriate member of EP or Customer Field Services staff should sign off the information to be recorded in the DG3 Register each week/ month.

Details of the Interruption Pro forma (see Appendix D) and spreadsheet can currently be obtained from Customer Systems in Capital House.

4.4 Unplanned Interruptions

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 the OMIS Interruptions Input Screen.

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 record all information on a pro forma sheet (see Appendix D). The pro forma sheet contains the raw data associated with the interruption and is taken to an appropriate computer workstation for input into OMIS. These pro forma sheets must be kept for audit purposes.

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 Work Planning Unit for processing.

Details input to the OMIS Reporting System are to include the interruption start time, as noted by the first affected customer, the time at which the supply was restored and whether a third party or an electrical supply failure was the cause.

4.5 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 Customer Systems in Capital House.

Networks Water and Leakage Services record interruption information on the OMIS system. EP and Customer Field Services record interruption information on Excel spreadsheet.

5.1 OMIS Interruption Recording System

OMIS allows five types of interruptions to be recorded:

- Unplanned;
- Planned;
- Unplanned Third Party;
- Overruns; and
- Planned – unwarned (Leakage Services only).

When all information is input into OMIS and is saved, the information is then included in the interruptions register within OMIS. This interruption record can be revisited with more accurate information until the interruption is checked as complete. The information contained on the OMIS input screen is then permanently transferred to the interruptions register and cannot be altered.

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 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.

Inputs to the OMIS Interruption System shall be closed out by the 10th of each following month. Checking of input data and local audit checks are to be carried out by the Networks Business Unit. Following these checks the networks Business Unit will release the data to Customer Systems for inclusion into the DG3 Register and calculations for KPIs.

5.2 Interruption Excel Spreadsheet

Planned interruptions undertaken by EP 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 an Interruptions Pro forma sheet and then transfer this information to the Interruptions Excel spreadsheet. The Excel spreadsheets should be collated at the end of each week/month and signed off by an appropriate member of EP or Customer Field Services staff and sent to Customer Systems for inclusion into the DG3 Register. All pro forma should be stored by EP and Customer Field Services for Audit purposes.

Details of the Interruptions Pro forma (see Appendix D) and spreadsheet can currently be obtained from Customer Systems 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 an Interruption Record Sheet including location, type and cause of interruption, and 'valve off'/'valve on' times. The sheets should be collected on a weekly basis, verified and input to OMIS by the Field Managers. Details should be recorded on OMIS as say, 1 – 10 High Street or 15 – 25 Main Road (property count).

b. GIS Polygons

In the case of large scale interruptions, red line polygons should be drawn around an affected area using CARTomap (the Company's GIS intranet facility) and MapInfo should be used to determine the number of properties and address details of the properties within the polygon.

Field Managers should use the details provided by the Field Technicians to red line polygon an affected area using CARTomap. The polygon should be sent to Asset Information Development (AID) who will invoke MapInfo to obtain a definitive list of addresses within the polygon. An MS Excel spreadsheet containing address details is returned to the Field Manager who should then reference it with the corresponding interruption record held on OMIS.

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

Information that is to be recorded for both planned and unplanned interruptions is contained in the OMIS user guide held by Customer Systems.

In general all interruption 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 30mins. Information about these interruptions is held by managers in Leakage Services and Customer Field Services and is therefore not required for the interruption 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 that 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 interruptions register except at the discretion of the Field Technician or Field Manager.

All Interruption records held on OMIS are to be approved by appropriate line management within each function and closed off by the 10th of the following month *e.g. all records for say April should be approved and closed by the 10th May*. Customer Systems will email the different functions reminding them of the deadline at the end of each month. Interruption records held by EP and Customer Field Services should be sent to Customer Systems by the same date.

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

All amendments to the base data contained in OMIS or information changed during the course of the development of the DG3 Register in Excel must be supported by a detailed explanation.

6.0 REPORTING

6.1 NI Water Reports

The OMIS Interruption System can be updated on a continuous basis as and when interruptions occur. The Monthly Summary Reports can be generated following the quality assurance checks carried out by Area Managers and Customer Field Managers and the release of data by the Functional Manager. These reports are used by the Customer Systems function to compile a DG3 Register for each month and corresponding KPIs.

The following reports are generated by Customer Systems for management information:

- DG3 monthly
- Interruption to Supply KPIs
- Annual DG3 Supply Interruption Report (developed to mirror the current AIR – Table 2 report as set out in the Annual Information Return Reporting Requirements and Definitions Manual).

6.2 Development of the DG3 Register and KPIs

Interruption data for each month is collected from 3 different sources (as described above) into a 'Composite Interruption Data' spreadsheet held in Customer Systems in Capital House. Interruption data from these sources is combined into an 'Interruption Record – Month' worksheet and is held as the combined data record for that particular month.

The interruption data record is transferred to an 'Interruption Record – Amended' worksheet where the raw data is examined for errors, anomalies duplications etc. These are re-classified if necessary and highlighted in red. The data is then categorised into the different interruption categories. These are: Unplanned Interruptions, Planned and Warned, Third Parties and Overruns.

The amended interruption data is transferred to the 'DG3 Register – Month' worksheet. Here the records are sub categorised into their time bandings, e.g. >3hrs, >6hrs, >12hrs, >24hrs for each category. This then forms the DG3 Register for that particular month.

The interruption data held on the DG3 Register that pertains to the AIR Reports and KPIs is transferred to the 'AIR Return & KPI' worksheet. This worksheet is in the form of two tables. The first is the extract from the AIR Table 2 – 'Properties affected by supply interruptions'. The table is expanded to allow for appropriate inputs for each month. These are recorded and summated at the end of the reporting year to provide the figure for the input into the AIR table for that particular line.

The second table contains the relevant DG3 Register information, recorded on a monthly basis, and used to calculate the KPIs. There are 3 KPIs pertaining to the DG3 Register. These are:

- Unplanned interruptions > 6hrs.
- Unplanned interruptions > 12hrs.
- Unplanned interruptions > 24hrs.
- (Unplanned Interruptions include third party interruptions and overruns).

These are expressed as percentages of total properties. These KPIs are calculated and monitored on monthly basis.

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.

Appendix A – DG3 Interruption to Supply - Roles & Responsibilities

Customer Relations Centre (Normal Hours)

- Log 'no water'/'burst main' complaints into RapidXtra system.

Customer Service Delivery - Networks Water

- The Area Managers and Field Managers are responsible for the procurement of information for DG3 within the Networks function.

Customer Service Delivery - Leakage Services

- The Area Managers and Field Managers are responsible for the procurement of information for DG3 within Leakage Services.

Engineering Procurement (EP)

- The EP Directorate is responsible for the installation of new water mains. Interruptions to supply arise as a result of connecting properties to the new water mains.

Customer Field Services

- Customer Field Services is responsible for meter maintenance and the installation of new meters. An interruption to supply to the property arises during the course of the installation.

Customer Systems

Customer Systems is responsible for the following:

- Receipt of all interruption information from Networks Water, Leakage Services, EP and Customer Field Services,
- Compiles each set of information into the DG3 Register,
- Audits Data,
- Produces reports for Management and Regulator,
- KPIs.

Telemetry Control Centres (Out of Hours)

Log 'no water'/'burst main' complaints into Work Planning (Ellipse) system and inform on call supervisor immediately.

- Westland Telemetry Control Centre (Tel: [REDACTED])

TCC E-mail Addresses:-

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

- Altnagelvin Telemetry Control Centre (Tel: [REDACTED])

TCC E-mail Addresses:-

[REDACTED]

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]

Networks Water - Area Managers / 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.
- Record interruption details as an entry into OMIS Interruption System.
- Provide supporting information on number of properties affected and reasons for interruption.
- Record details of interruptions received from on-call staff.
- Area Managers and Customer Field Managers to carry out audit checks on OMIS entries and Interruptions Register.
- Area Managers to advise Customer Systems following the quality assurance and compliance checks.

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.

Functional Manager

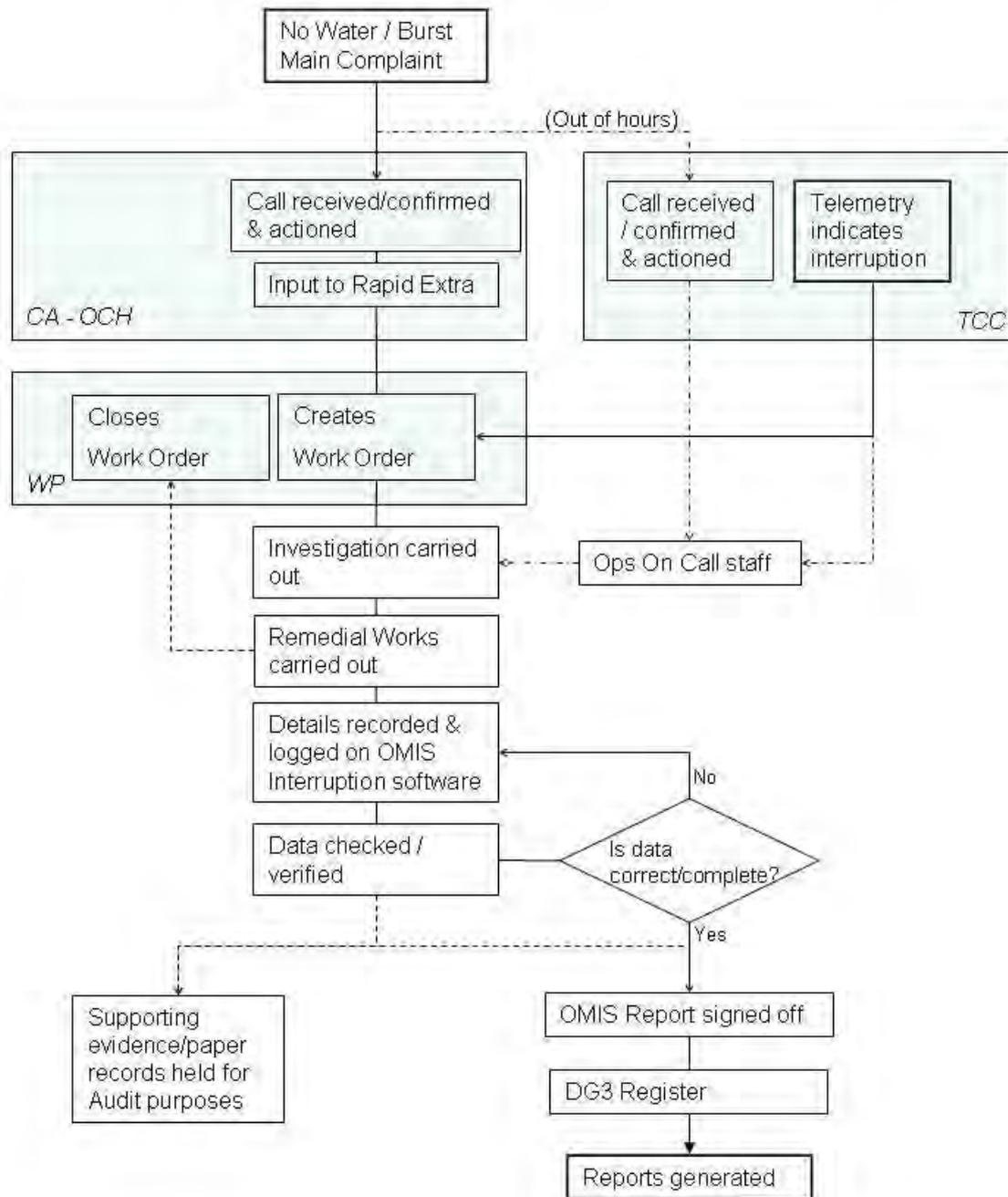
- Approves OMIS Interruptions Register and release data for reporting purposes.

Regulation & Business Performance Section

- Submit Annual Report to NIAUR.

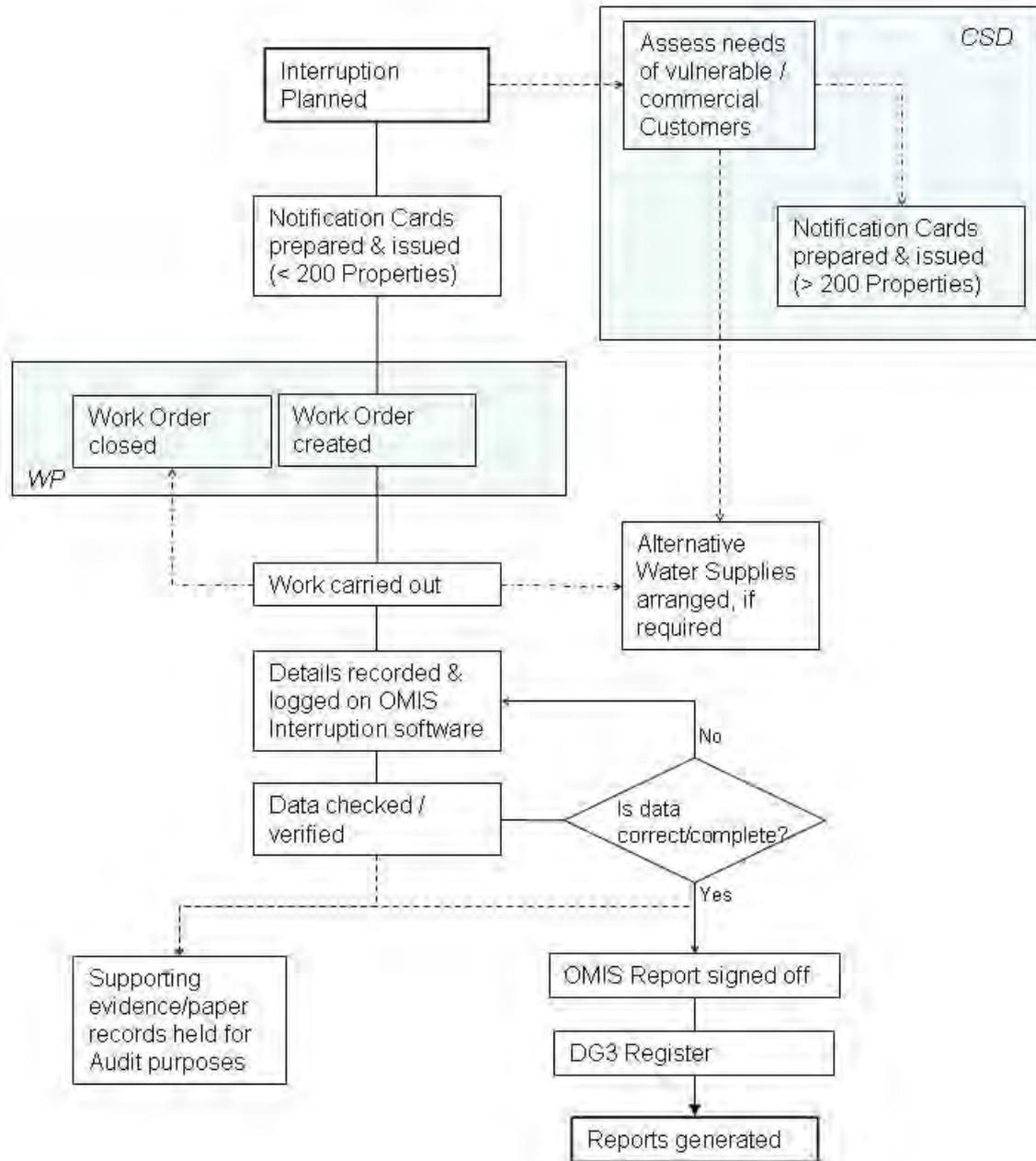
DG3 Process Flow Diagram - Unplanned

Appendix B



DG3 Process Flow Diagram - Planned

Appendix C



Appendix D – Pro forma - Interruption Information Sheet

Add New Interruption Record			
Interrupt Number	Reported By	Works Request No	Works Order No
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Details Of Location			
Functional Area	Networks Office	Total Properties	
<input type="text"/>	<input type="text"/>	<input type="text"/>	
Location (255 characters max)			
<input type="text"/>			
Type and Cause Of Interruption			
Type Of Interruption	Cause Of Interruption		
<input type="text"/>	<input type="text"/>		
Third Party	MainsType		
<input type="text"/>	<input type="radio"/> Trunk <input type="radio"/> Distribution		
Warning Details			
Type Of Warning	Warning Issued	<input type="text"/>	<input type="text"/>
<input type="text"/>	Planned Start	<input type="text"/>	<input type="text"/>
	Planned End	<input type="text"/>	<input type="text"/>
Time Of Interruption		Alternate Supplies	
Interrupt Start	<input type="text"/>	<input type="text"/>	
Supply Restored	<input type="text"/>	Length Of ITS (Hrs)	
All Properties Restored	<input type="text"/>	<input type="text"/>	Overrun (Hrs)
	<input type="text"/>	<input type="text"/>	<input type="text"/>
No Of Properties Affected (Complete Duration Including Any Overrun)			
> 0 Hrs	> 3 Hrs	> 6 Hrs	> 12 Hrs
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
No Of Properties Affected (During Overrun Only)			
> 0 Hrs	> 3 Hrs	> 6 Hrs	> 12 Hrs
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Comments (255 characters max)			
<input type="text"/>			
			Close Save

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

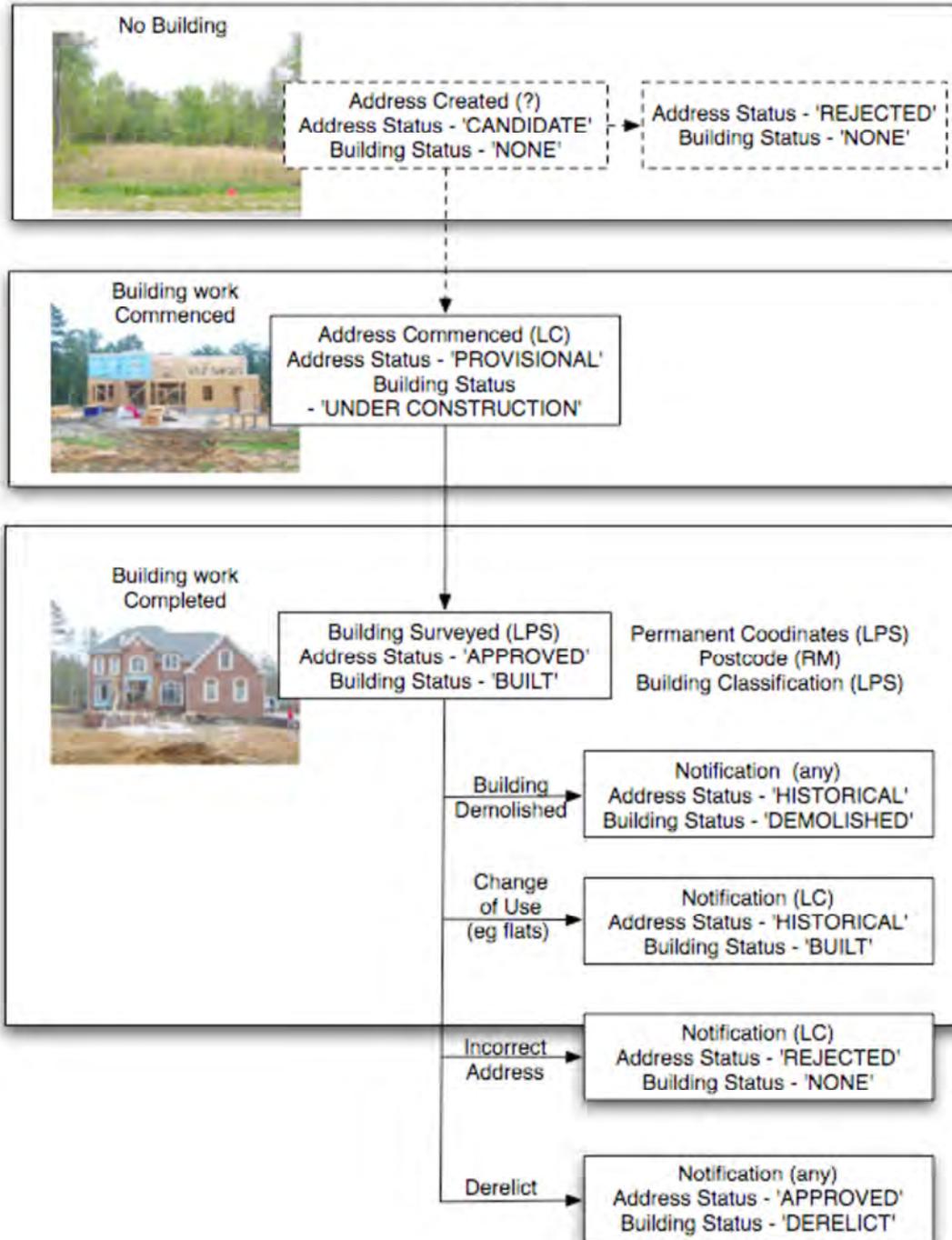
This field reflects changes to the Building_Status.

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)

Pointer Lifecycle



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.

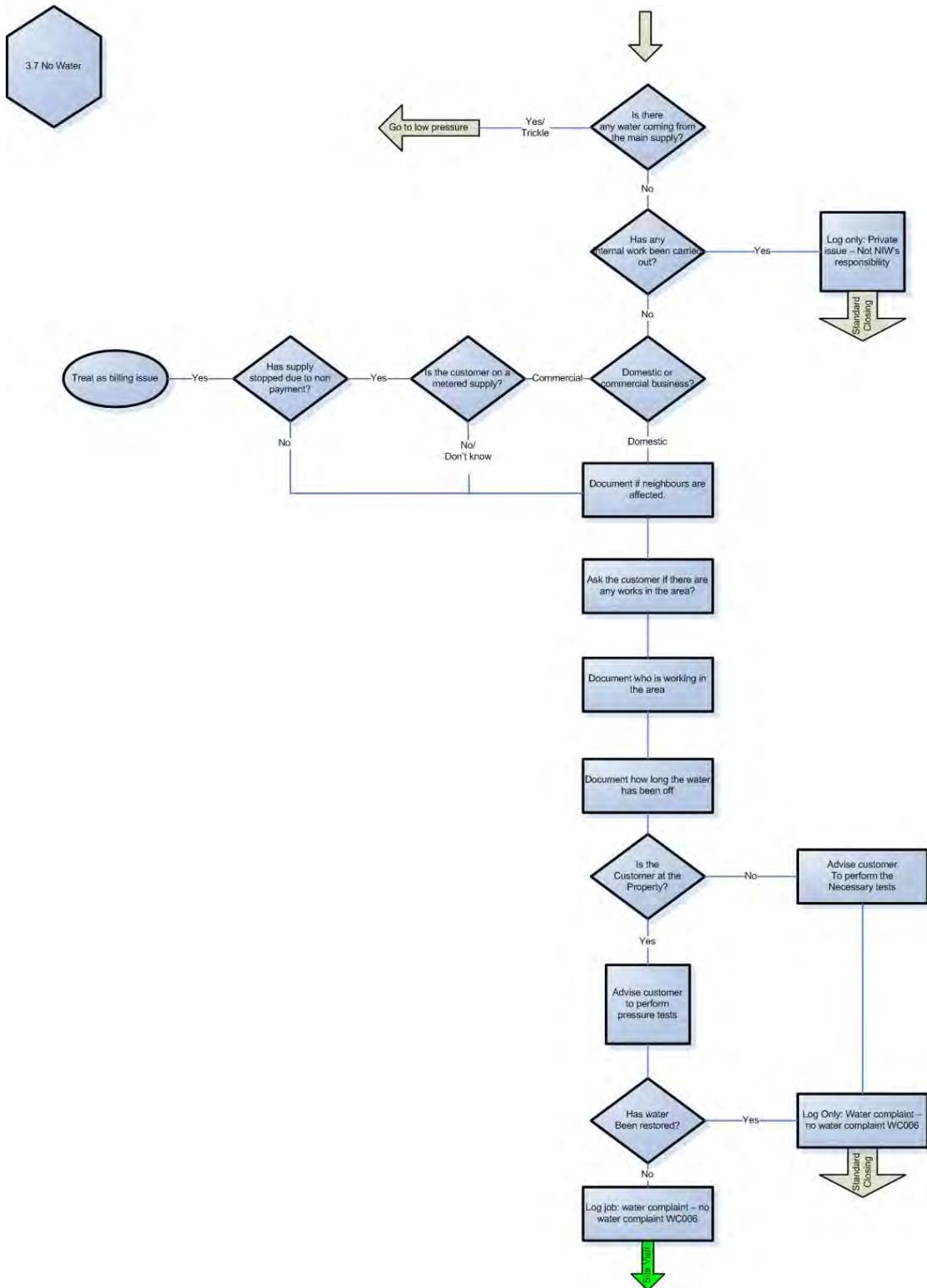
Constraints

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.

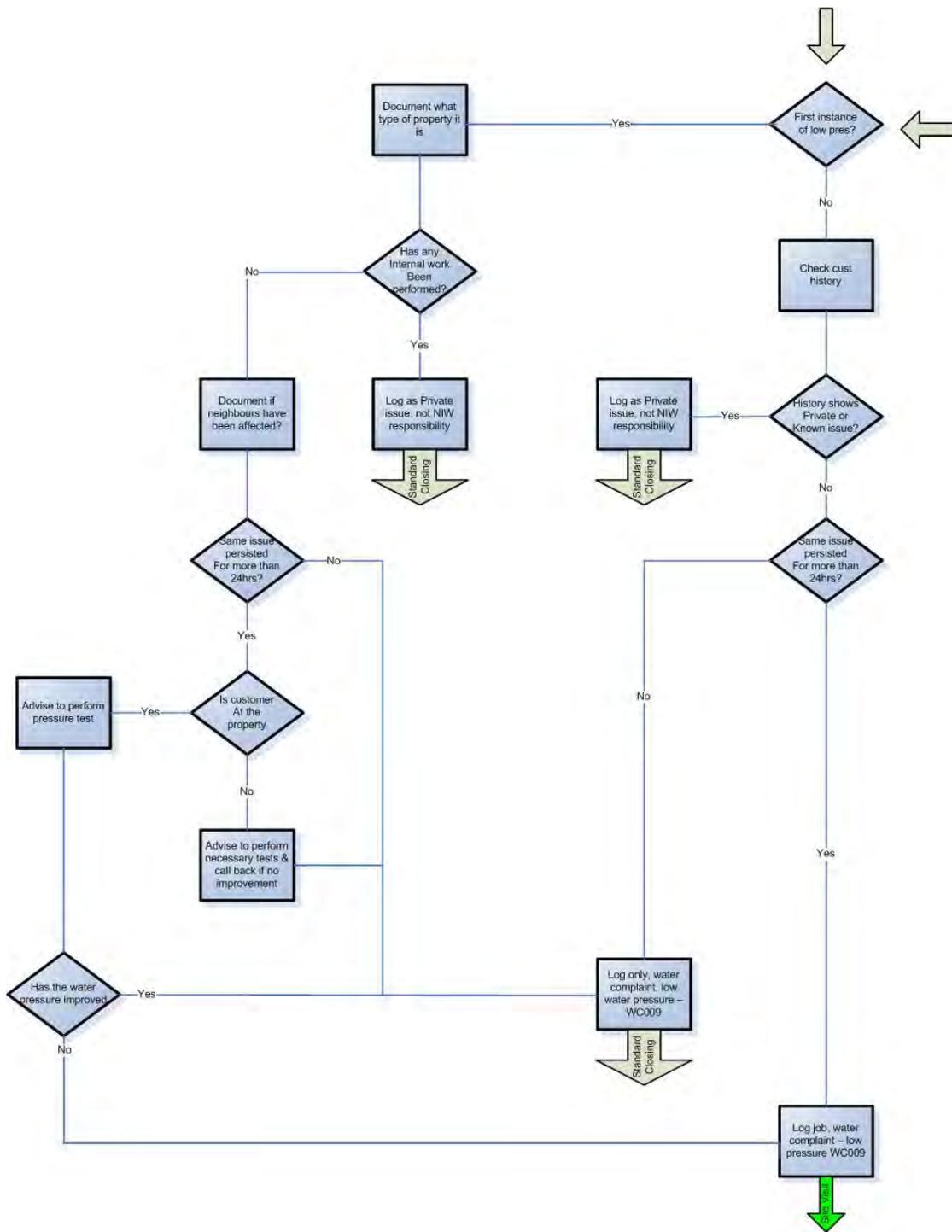
Details

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



Northern Ireland Water
Level of Service Methodology AIR14
DG5 Internal Flooding

Contents

- 1. Introduction**
 - 2. DG5 Flooding Incidents – Internal**
 - 3. DG5 Properties at Risk of Flooding – Internal**
- Appendix A – NI WATER DG5 Internal Flooding Register Methodology**

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 14:

- 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 AIR14.

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 2013 to March 2014 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 AIR14, 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 to be 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). The company has included the Duty Manager's Upward Report detailing a heavy rainfall event, for one incident reported in the AIR13 period (L4 & L4a).
5. These properties were then recorded on a spread sheet 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 14 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. Line 15a relates to properties on the Historical register which have not been fully investigated and categorized accordingly thus the nil return.
8. The required information to populate Line 17 is extracted directly from the monthly spread sheet completed by the contractor.

Changes in Methodology over the Previous Year

As per reporters recommendation no.7 NIW are now being more proactive in their approach to repeat blockages. NIW Customer Field Managers (CFM) now have the resource of designated field technicians who are carrying out CCTV investigations on sewers which have repeat blockage complaints, any faults found have been remedied thus reducing the number of repeat incidents, as result of this work NIW are now in a better position to report on blockages have occurred in a private lateral, public lateral or public main sewer the contractor also now provides this level of detail in his monthly returns.

3. Internal Flooding Register

Internal Flooding Process

All internal flooding incidents are subjected to a robust investigation (See Appendix D – 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 cross-checked 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 14/15.

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 two Engineering Procurement appraisal projects – which seek to identify permanent solutions at the locations.

Additions to the Register

In year 13/14, 53 no. properties were added to the flooding register. These may be divided into the following categories:

- i. 26 properties within the Sydenham network (East Belfast) which have been added as a result of an ongoing network study. The consultant executing the network study has gathered additional information regarding historic (pre-2013) flooding incidents.
- ii. 17 properties within the [REDACTED] of the Belfast WWTW network. The only recorded internal flooding incidents at these properties relate to 'severe' events. The properties have been added to the register as a result of sewer-network model simulations, including the use of 2-D simulations of overland flow.
- iii. 9 properties at miscellaneous locations, where additional information has become available regarding historic (pre-2013) flooding incidents.
- iv. One property ([REDACTED]) as the result of a flooding incident in year 13/14.

Transfers between Register categories (2 in 10, 1 in 10 and 1 in 20)

One transfer was made in year 13/14 - [REDACTED] was transferred from the 1 in 20 to the 2 in 10 Register.

Prioritisation of capital schemes

No formal prioritisation process is applied.

All capital works projects are submitted to the NIW Capital Investment Panel for approval before implementation.

Properties which have not flooded in the last 10 years

33 properties remain on the Register which have not flooded in the past 10 years (excluding severe weather).

4 of the properties are at [REDACTED], which has been confirmed as an 'At Risk location' by modelling.

A further 4 are at [REDACTED], which has also been confirmed as an 'At Risk location' by modelling.

The others are the subject of ongoing Engineering Procurement appraisals.

**Appendix A NI Water DG5 Internal Flooding
Register - Methodology**



DG5 Internal Flooding Register - Methodology

Final v1.0

31st March 2012

1	Main Contributors	2	Aspect/Section	3	Notes
			Draft		
			Final		

4		5		6	
Bid/Project Code: 41514657		Document No: 0.6		Controlled Copy No: (in COLOUR – not black)	
Revision No	Date	Description/Amendment	Checked	Reviewed	Authorised for Issue
0.8	26 Feb 11	Revise to include improved approach	AM	KM	
1.0	31 Mar 12	Finalised ahead of sign-off by DG5 Panel	AM	KM	MMcl

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12 Introduction

12.1 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.

12.2 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.

13 Definitions

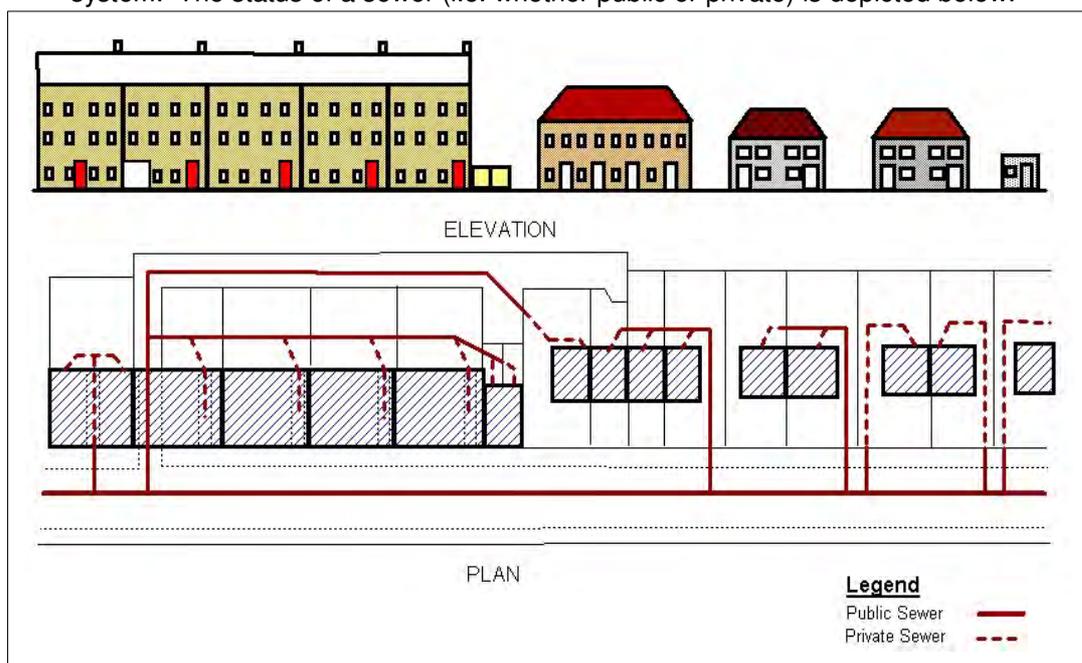
The following definitions are to be applied when recording and reporting properties and incidents held on NI Water's DG5 Internal Flooding Register.

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.

13.1 Legal Definitions

13.1.1 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.

13.1.2 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.

13.1.3 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.

13.1.4 Basement Flooding

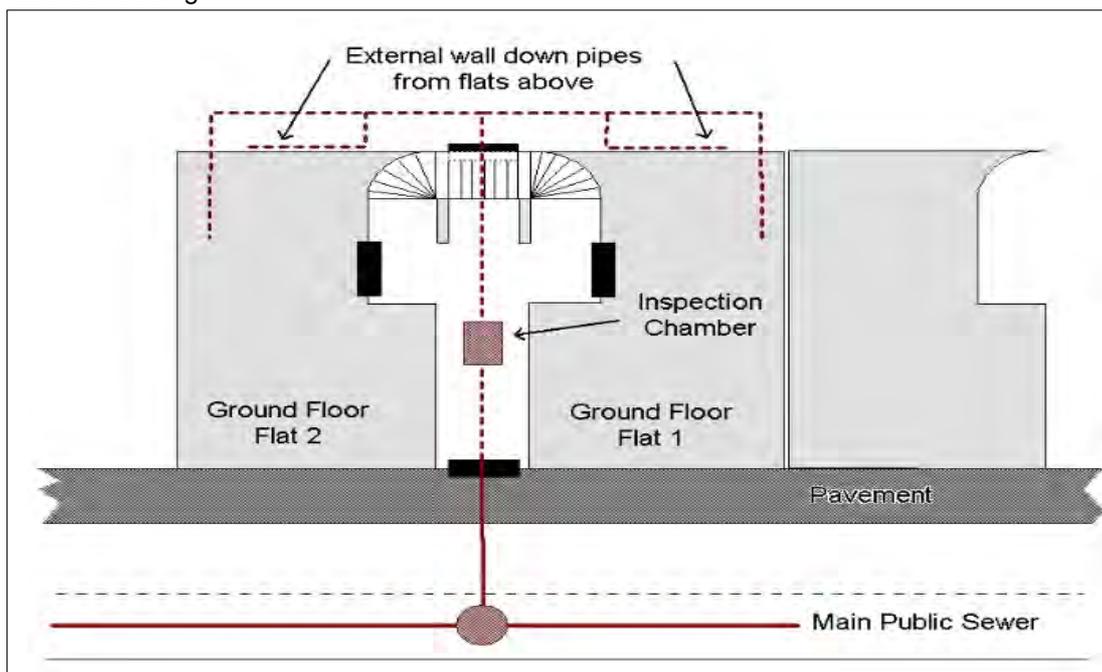
Customers do not have a right to connect wastewater discharges from a basement directly into the public sewerage. If a customer wishes to connect, then Northern Ireland Water will carry out investigations to confirm that by connecting the basement discharge to the public system it does

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.

13.1.5 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.



13.1.6 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.

13.1.7 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.

13.1.8 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.

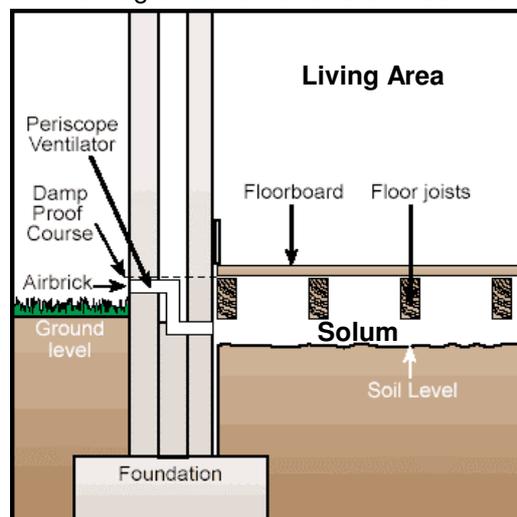
A permanent solution is defined as one that permanently addresses the cause of the hydraulic overload. Permanent works would enable a property to be removed from the DG5 Internal Flooding Register.

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'

13.2 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.

13.2.1 Restricted Toilet Use

Restricted Toilet Use (RTU) occurs where there is no internal flooding but where the customer is unable to flush their toilet without a risk of causing internal flooding of the property.

13.3 Flooding Cause Definition

13.3.1 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.

13.3.2 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

13.3.3 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.

13.3.4 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.

13.3.5 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.



13.3.6 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 incoming 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.

13.3.7 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 Floods Strategy Steering 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.

13.3.8 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.

13.4 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.

14 Internal Flooding Register – Governance

14.1 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.

14.2 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.

15 Internal Flooding Register – Business Process

15.1 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.

15.2 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.

15.3 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.

15.4 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.

15.5 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.

15.6 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.

15.7 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

15.8 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.

16 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.

16.1 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).

16.1.1 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.

16.1.2 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.

16.1.3 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.

16.1.4 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.

16.1.5 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.

16.1.6 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.

16.1.7 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.

16.1.8 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.

16.1.9 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.

16.1.10 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.

16.1.11 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 larger 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;

$$428 / 24 = 17.83 \text{ (rounded up to 18 units)}$$

16.1.12 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.

16.1.13 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'.

16.1.14 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.

16.2 Format of Internal Flooding Register

16.2.1 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

16.2.2 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.

17 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.

18 Internal Flooding Register – Solutions

18.1 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.

18.2 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.

18.3 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.

19 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.

20 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.

– 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 [REDACTED]
Your Ref [REDACTED]
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 ([REDACTED]) or emailing me ([REDACTED]) Your assistance in this matter will be much appreciated.

Yours faithfully,

[REDACTED]
Asset Performance

**– 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	

– DG5 Flooding Incident Report

Incident Report Form Contractor**Northern Ireland Water – Flooding Incident Report**

Work Order Ref No: _____ Name: _____

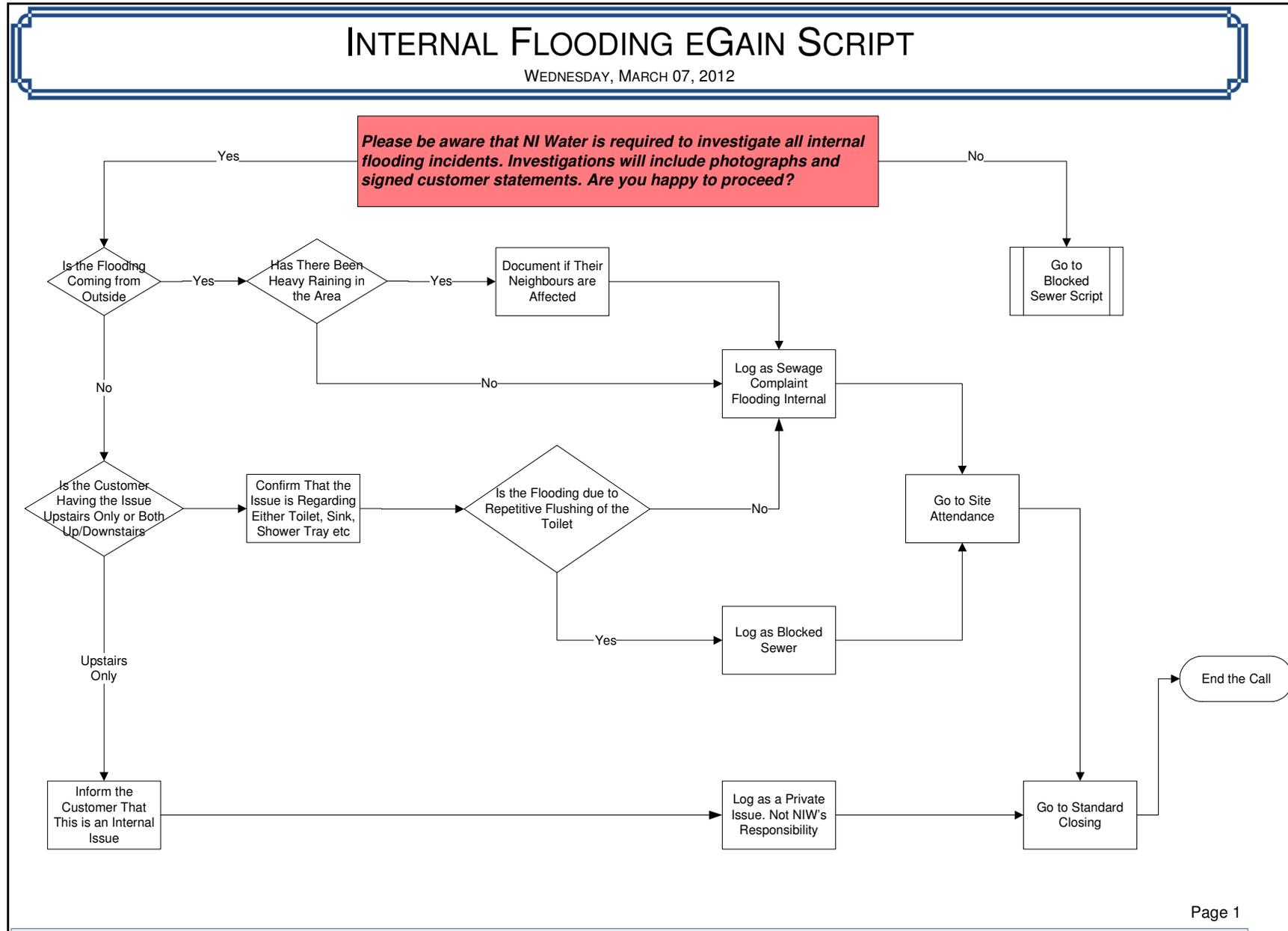
Location: _____

Date: _____ Arrival time: _____

- 1) Internal Flooding: Yes No
- Main Sewer Lateral Sewer
- Adjacent properties flooded Detached garages flooded
- Basements/Cellar flooded Restricted Toilet use
- 2) External Flooding: Yes No
- Main Sewer Lateral Sewer
- Public road/footpath Public area
- Agricultural land Curtilage
- 3) Comments on cause of flooding: (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**ATTACH PHOTOS FOR FLOODED JOBS:**

– Call Centre DG5 Caller Script



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 which 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 which 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.

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 50 of the 479 open DG6 contacts were checked to see if they had a holding letter issued on or before working day 5 and 100% of the 50 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 CallMedia ACD. The Avaya switch is tightly integrated with the CallMedia 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 CallMedia 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 CallMedia. 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 2013/14

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 NIW Customer Services. The Accounts 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 AS Complaints & Exec Mail Team inboxes 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 2014. 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 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 Contact Management Audit was carried out in Q1 of 2013/14.

One of the recommendations from IA was that refresher training and guidance was provided to the Account Services team on the definition of DG7 contacts. All Account Services staff members were re-briefed and reference sheets providing DG definitions were made available.

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 Quality Assurance process during which adherence to an agreed Letter Writing Checklist is checked.

Monthly sampling of DG7 contacts is also undertaken by NIW Contract Office to ensure consistency of DG7 categorisation. The results of this are fed back to AS Mgmt. Team for agreement.

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;
- 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 report year

Nothing to report in this regard.

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.

The Company endeavours to answer all correspondence, 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; this is also checked on a monthly basis through DG7 sampling.

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

Complaints are date-stamped at point of receipt and this is used as date of receipt to NIW.

Date of Dispatch

The date of dispatch refers to the date 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 e-mailed, faxed or hand-delivered contact 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 which 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 letter 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 continued to be in place throughout the reporting period to support reporting on the number holding responses issued throughout 13/14. This was collated using a manually-recorded, off-system process.

The figure reported in Line 14 is the total recorded number of holding responses issued to customers during 13/14 owing to pending investigations linked to open DG7 contacts. It does not include holding responses issued within 13/14 in relation to DG7 contacts received in the previous reporting year.

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

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 267 DG7 contacts which were received in 13/14. This equates to 11% of the received total volume. Therefore, it can be concluded that one or more holding response was issued in relation to 11% of the DG7 contacts received during 13/14.

Exploration into on-system reporting using Savvion continues into 14/15.

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 which are metered.

Company Reading and Billed

If a Company reading has been taken during the current financial year, 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, for transfer to Rapid.

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 are transferred from Rapid to the Routestar reading system.

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, which is subsequently updated upon the meter being read.

The data transfer from the Routestar 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/directed to phone to, while advertised refers to those customer contact points which appear in telephone directories, newspaper advertisements, on the Northern Ireland Water (NIW) website, NIW literature or are specifically printed (rather than typed) onto NIW letterheads. It excludes however, those which are of a temporary nature established to handle a specific topic.

NIW PACC points include:

- **Billing Enquiries:** 0845 877 0030
- **Debtline:** 0845 8770 050
- **Waterline:** 0845 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 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:** 0845 877 0002
- **Emergency Services:** 0845 877 0008
- **Telecare Quick Check:** 0845 877 0080
- **Closed Communities:** 0845 877 0007
- **Aged Debt:** 0845 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 which will identify the log for inclusion in the reported figures.

NIW excludes from the reported figures, those telephone complaints which 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.

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:

“Thank you for calling WaterLine. Calls are recorded and may be used for quality assurance and training purposes. Please select from one of the following options. For New Connections please press 1, to report a problem with the water supply or sewerage please press 2, for septic tank desludging please press 3, for all other enquiries please press 4. To hear these options again please press 5.”

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 Team on a monthly basis using the MI reports from both HVCA and Call Media systems.

Reporting of Telephone Complaints

NIW MI 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 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 customers 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 which 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 'back office' or NIW investigation is required in order to provide a 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 which 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 will 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 can not 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 which 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 210 line capacity dedicated to NIW customers. 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 Callmedia 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.

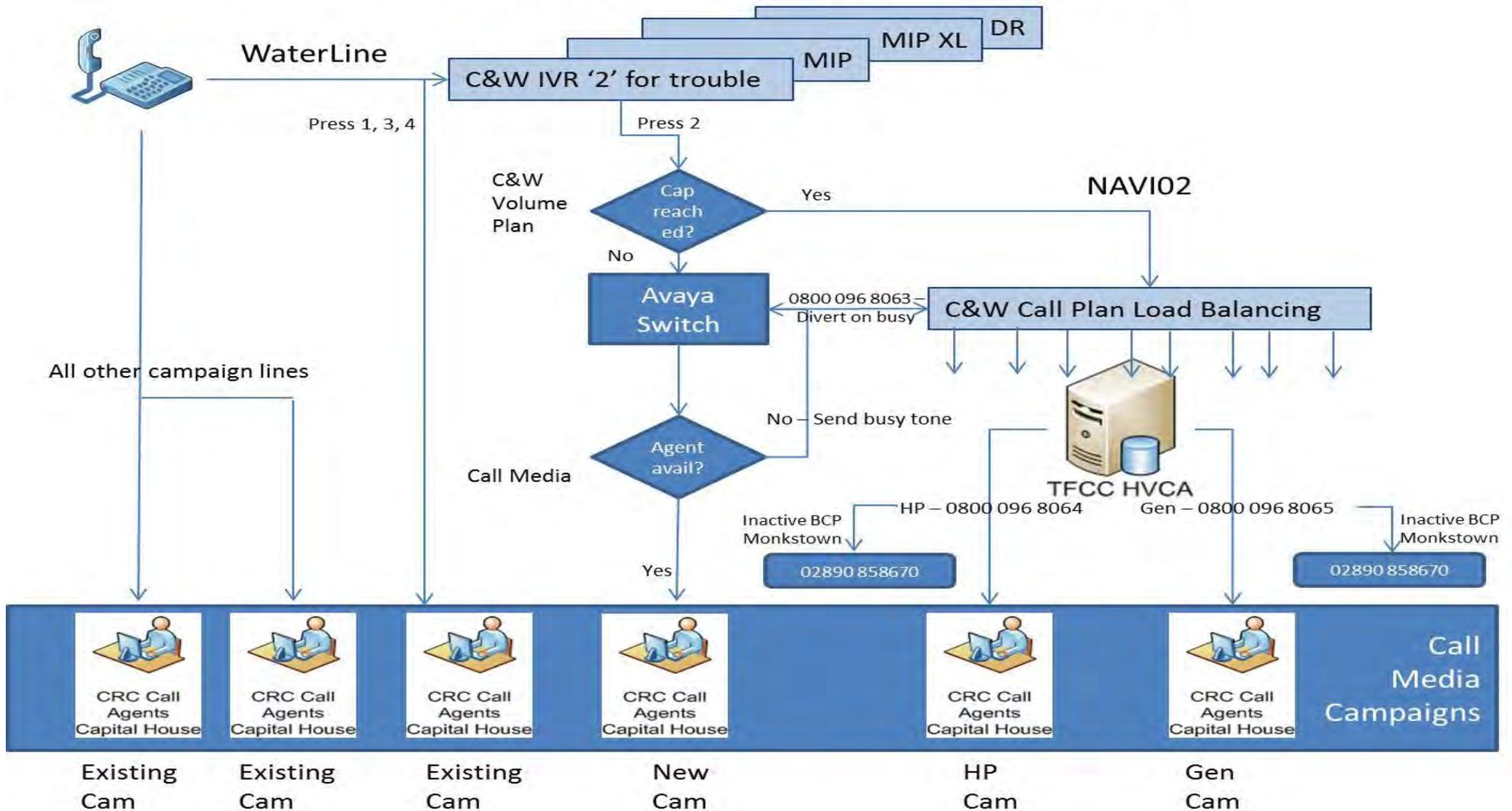
Rejected Calls

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





Annual Information Return 2014

Section 4

Customer Research Appendix

Annual Information Return 2014

Customer Research Appendix

Customer Satisfaction

One of the fundamental measures concerning the level of service received by customers is customer satisfaction. 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 McCallum Layton, an independent market research company. McCallum Layton 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 & Q2 200 interviews (performed together), Q3 100 interviews and Q4 100 interviews. Due to delays resulting from the Procurement exercise to re-appoint a contractor, the Q1 interviews had to be combined with Q2.

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 advised of the week in which call data will be collected for a survey two weeks in advance.

NIW is required to record all incoming calls to the contact centre for the seven days in question, irrespective of how calls were handled.

This data is then supplied to McCallum Layton 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. The following table shows the actual number of useable records received in each Wave.

Wave 1	Wave 2	Wave 3	Wave 4	Total 13/14
See above	4889	5004	4912	14805

Sample management

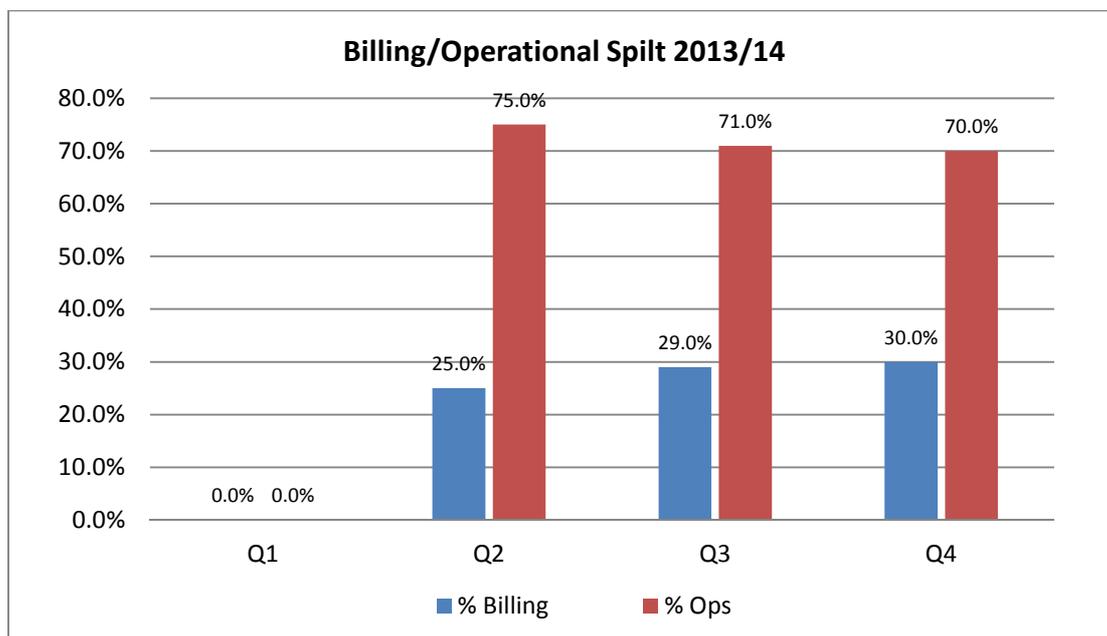
Upon receipt of the sample, McCallum Layton applied the following sample management procedures for each water company:-

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 which appears in the supplied sample more than once and of customers which 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.

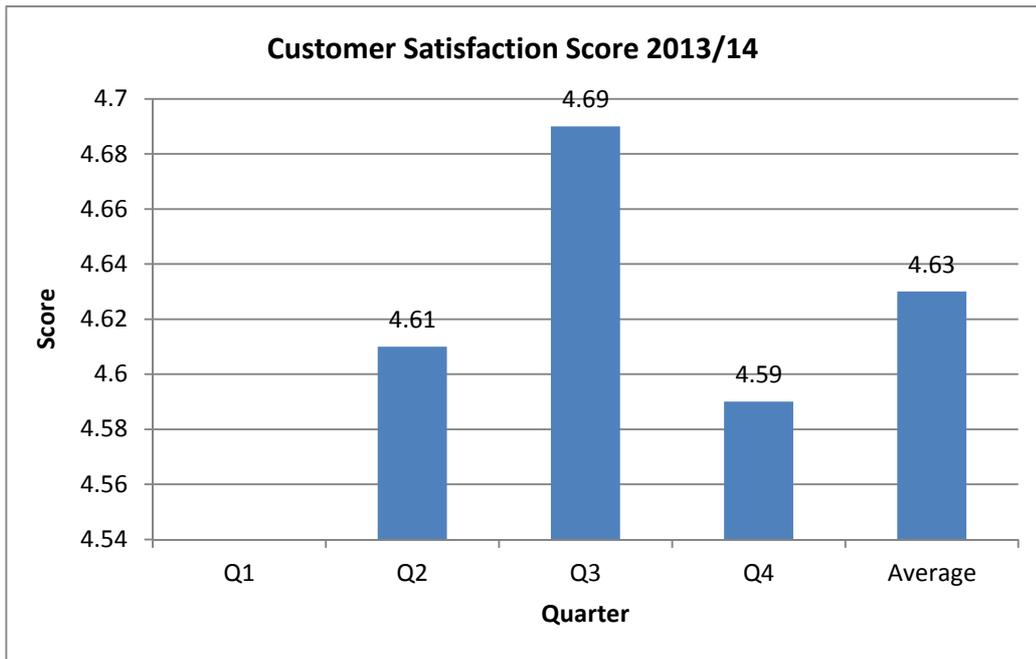
Given that NIW is not billing domestic customers (unlike other UK water companies), it is important to establish the proportion of calls received by day and query type to ascertain the quotas needed to ensure a representational spread of interviews was achieved.

The following table shows the NIW percentage split for billing and operations, per quarter.



Overall Performance Assessment

NIW achieved an overall score of 4.63/5.0 for the reporting year, falling short of the target set at the beginning of the year of 4.7, as follows;



In 2013/2014 NIW were not ranked against the English and Welsh water companies as they moved to the SIM and CES methods whereas the Regulator stated that NIW were to remain with the Customer Satisfaction Methodology..

Overall, the annual score has increased over the first 3 years of reporting with slight decreases in the next 3 years with the 13-14 score being the highest to date as shown below.

