

Annual Information Return 2013

Public Domain Version





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Annual Information Return 2013

Section 1

Board's Overview

Board's Statement

In support of Northern Ireland Water's 2013 Annual Information Return (AIR13), its Board of Directors is required by the Utility Regulator to prepare a statement on the compilation of AIR13, explaining how it has satisfied itself as to the accuracy and completeness of the information provided.

The Directors consider that AIR13 provides a true and fair view of the state of affairs of NI Water for the financial year 2012/13. In preparing AIR13, 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 AIR13 is as reliable, accurate and complete as is reasonably practicable.

Processes and Internal Systems of Control

AIR13 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 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.

AIR13 Project Governance

The AIR13 project was coordinated by the Regulation Manager and representatives (senior managers) from relevant functional areas, i.e. those functions which contribute data to the AIR13 submission.

The Regulation Manager ensured:

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

Senior managers from across NI Water chaired AIR functional working groups. The working groups' roles included:

- 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.

Responsibility for each of the key deliverables was agreed by the AIR Project Board. Authors, reviewers and approvers of Line Methodologies, Data Tables and Company Commentaries were designated for all input data in the AIR13 submission.

To ensure reporting consistency for AIR13, every item of data provided in the AIR13 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 AIR13 Reporting Requirements on 28 March 2013. Audits were undertaken by the company's Auditor and the Reporter in

May and June 2013. Feedback from the Reporter and Auditor was used to redraft the tables and commentaries when appropriate. The complete AIR13 submission was endorsed by the Executive Committee and Board in June 2013.

Board Involvement

In summary, the involvement of NI Water's Board in the completion of AIR13 included:

- Reviewing monthly company business performance analyses;
- Receiving a presentation from the Reporter and Auditor in June 2013;
- 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 AIR13.

The following measures help to ensure that AIR13 complies with the Utility Regulator's Reporting Requirements and provides some assurance in respect of material assumptions and judgements included in the AIR13 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 Annual Information Return.
- Both the Reporter and the Auditor present to the Audit Committee and/or Board near the conclusion of the AIR process.

- Directors directly 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 AIR13.

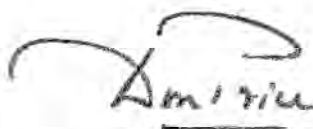
Each Director is satisfied that:

- 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:



Trevor Haslett
Chief Executive, Northern Ireland Water



Donald Price
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 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10	REPORTING YEAR 2010-11	REPORTING YEAR 2011-12	REPORTING YEAR 2012-13
A SERVICE AND PERFORMANCE								
1 DG2 Percentage of properties receiving low water pressure	%	2	1.29	0.72	0.27	0.25	0.22	0.17
2 DG3 Overall performance score	nr	2	1.43	1.41	2.21	95.79	0.97	1.98
3 DG4 % population - hosepipe restrictions	%	1	0.0	0.0	0.0	0.0	0.0	0.0
4 DG4 % population - drought orders	%	1	0.0	0.0	0.0	0.0	0.0	0.0
5 DG6 Percentage dealt with within 5 working days	%	2	95.0	98.6	98.1	98.9	99.97	100.09
6 DG7 Percentage dealt with within 10 working days	%	2	90.5	97.6	99.4	100.0	99.27	99.78
7 DG8 Bills for metered customers – performance	%	2	71.8	93.3	92.3	96.1	97.88	98.73
8 DG9 Percentage of calls not abandoned	%	2	1.0	1.1	2.6	88.2	99.15	98.45
9 DG9 Percentage of calls not receiving the engaged tone	%	2	0.0	0.0	0.0	32.8	100.00	100.00
10 Water ESL (1) enter description (including units)				N/C	N/C	These lines have not been completed as the Monitoring Plan has not been agreed. However details of defined outputs can be obtained from the CIM, Table 40.	No defined outputs	No defined outputs
11 Water ESL (2) enter description (including units)				N/C	N/C			
B DRINKING WATER QUALITY OUTPUTS								
12 % mean zonal compliance with drinking water Regulations	%	2	99.30	99.49	99.74	99.81	99.83	99.80
13 OPI(TIM)	nr	2	98.98	99.22	98.90	99.08	99.31	98.96
14 Completion of nominated water treatment works schemes to improve water quality	nr	0	0	3	2	2	0	0
D SERVICEABILITY								
20 Mains bursts per 1,000 km	nr	0	139	141	147	137	101	93
21 Water treatment work coliform non-compliance	%	2	0.12	0.08	0.08	0.01	0.00	0.05
22 Water Infrastructure	text		N/C	N/C	NI Water is currently in the process of defining serviceability indicators with NIAUR. Until these indicators have been agreed these lines cannot be usefully completed to indicate serviceability trends.	NIW is currently defining serviceability indicators with NIAUR, and until these are agreed lines 22 and 23 cannot be usefully completed.	Stable - however serviceability indicators are still to be agreed with NIAUR to define and measure serviceability	Stable - however serviceability indicators are still to be agreed with NIAUR to define and measure serviceability
23 Water non-infrastructure	text		N/C	N/C				
E DEFINED OUTPUTS FOR MAINTAINING BASE SERVICES			Description					
24 Water infrastructure (1)	No defined outputs							
25 Water infrastructure (2)								
26 Water non-infrastructure (1)								
27 Water non-infrastructure (2)								

SERVICEABILITY ASSESSMENT
S Stable
M Marginal
I Improving
D Deteriorating

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 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10	REPORTING YEAR 2010-11	REPORTING YEAR 2011-12	REPORTING YEAR 2012-13	
A SERVICE PERFORMANCE									
Sewer flooding- internal									
1	2 in 10 register at end of year	nr	0	80	80	1	6	17	30
2	1 in 10 register at end of year	nr	0	0	745	704	3	10	10
3	1 in 20 register at end of year	nr	0	0	0	211	189	153	153
3a	Potential risk of property flooding identified requiring further investigation to assess the risk category.	nr	0		6	8	0	0	0
4	Properties flooded in the year (overloaded sewers)	nr	0	195	3	6	4	10	189
5	Properties flooded in the year (other causes)	nr	0	366	23	5	28	23	41
Sewer flooding- external									
6	Areas flooded externally in the year (overloaded sewers)	nr	0	899	1,792	1,196	0	313	225
7	Areas flooded externally in the year (other causes)	nr	0	4,283	7,968	6,872	1,314	N/C	3,212
B QUALITY & ENVIRONMENTAL COMPLIANCE - Total									
8	% of WWTWs compliant (Water (NI) Order numeric consents)	%	1	87.0	90.4	91.9	88.7	93.3	93.6
9	% of WWTWs compliant (UWWTD consents)	%	1	89.6	92.0	92.9	93.6	96.2	97.5
10	% of total p.e. served by WWTWs compliant with Water (NI) Order consent (LUT)	%	2	N/C	N/C	93.80	95.57	96.45	98.90
11	% of total p.e. served by WWTWs compliant with UWWTD consent (LUT)	%	2	92.40	89.38	97.58	96.58	99.10	99.32
11a	% of total p.e. served by WWTWs complying with Water (NI) Order numeric consents	%	2				87.95	95.13	98.78
11b	% of total p.e. served by WWTWs complying with UWWTD consent	%	2				96.58	96.07	99.02
12	% of intermittent discharges satisfactory	%	2	67.97	93.89	74.01	73.67	76.68	79.01
13	Percentage unsatisfactory sludge disposal	%	2	0.00	0.00	0.00	0.00	0.00	0.00
C QUALITY AND ENVIRONMENTAL ACTIVITIES AND OUTPUTS									
14	Delivery of improvements to nominated UIDs as part of a defined programme of work	nr	0	N/C	27	11	20	43	38
16	Delivery of improvements to WWTW through nominated schemes as part of a defined programme of work	nr	0	16	44	63	29	15	12
18	Total sewage sludge produced (inc. PPP)	ttds	1	38.4	38.0	37.9	38.1	39.0	38.4
D SERVICEABILITY TO CUSTOMERS									
20	Sewer collapses per 1,000 km	nr	1	47.3	96.3	68.7	84.9	80.7	73.6
21	Number of high and medium pollution incidents attributable to NI Water	nr	0	67	56	55	46	44	18
22	% of WWTWs discharges compliant with numeric consents	%	1	86.7	90.0	92.1	88.3	92.5	93.2
23	Sewerage infrastructure	text		N/C	N/C	NI Water is currently in the process of defining serviceability indicators with NIAUR. Until these indicators have been agreed these lines cannot be usefully completed to indicate serviceability trends.	NIW is currently defining serviceability indicators with NIAUR, and until these are agreed lines 23 and 24 cannot be usefully completed.	Stable - however serviceability indicators are still to be agreed with NIAUR to define and measure serviceability	Stable - however serviceability indicators are still to be agreed with NIAUR to define and measure serviceability
24	Sewerage non- infrastructure	text		N/C	N/C				
E DEFINED OUTPUTS FOR MAINTAINING BASE SERVICES									
25	Sewerage infrastructure (1)	Description							
26	Sewerage infrastructure (2)	No defined outputs							
27	Sewerage non-infrastructure (1)								
28	Sewerage non-infrastructure (2)								

SERVICEABILITY ASSESSMENT
S Stable
M Marginal
I Improving
D Deteriorating

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL RETURN - BOARD'S OVERVIEW

TABLE C - EXPENDITURE & FINANCIAL PERFORMANCE MEASURES (TOTAL)

DESCRIPTION	UNITS	DP	REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10	REPORTING YEAR 2010-11	REPORTING YEAR 2011-12	REPORTING YEAR 2012-13
A TOTAL EXPENDITURE								
1 Total operating expenditure - water service (NI Water only)	£m	3	95.358	98.499	71.762	87.148	76.089	71.882
1a Total operating expenditure (PPP) - water service	£m	3	N/C	N/C	10.944	1.795	2.051	1.845
2 Total capital expenditure (excl. adopted and nil cost assets)	£m	3	80.389	206.859	101.554	73.876	84.067	69.303
3 Total operating expenditure - sewerage service (NI Water only)	£m	3	88.395	109.092	97.808	71.569	69.725	72.113
3a Total operating expenditure (PPP) - sewerage service	£m	3	2.872	N/C	17.975	23.371	23.457	26.488
4 Total capital expenditure (excluding adopted and nil cost assets)	£m	3	173.896	186.296	156.420	88.267	107.944	92.709
B CURRENT COST ACCOUNTS - PROFIT & LOSS								
5 Total Turnover	£m	3	294.057	327.395	347.569	345.740	354.819	366.398
6 Current cost operating costs (including CCD & IRC)	£m	3	-278.250	-315.427	-328.924	-341.824	-355.174	-349.470
7 Current cost operating profit	£m	3	17.077	11.626	22.963	8.893	2.184	19.872
C CAPITAL BASE & POST TAX RETURN								
8 Capital Value Year - End (outturn)	£m	3	984.814	1,194.686	1,421.544	1,582.344	1724.786	1812.800
9 Total net debt	£m	3	250.717	435.006	617.211	725.832	809.900	868.158
10a Post tax return on capital	%	2	1.88	1.06	1.72	0.58	0.13	1.12
10b Pre tax return on capital	%	2	N/C	1.06	1.72	0.58	0.13	1.12
D KEY FINANCIAL INDICATORS								
11 Cash interest cover (funds from operations; gross interest)	ratio	2	12.26	5.75	3.97	3.07	3.55	3.34
12 Adjusted cash interest cover (funds from operation less capital charges; gross interest)	ratio	2	2.17	0.77	0.49	-0.28	0.16	-0.03
13 Adjusted cash interest cover (funds from operation less capital maintenance; gross interest)	ratio	2	5.12	1.62	1.86	1.77	1.52	1.70
14 Funds from operations: debt	ratio	2	0.43	0.24	0.18	0.13	0.16	0.15
15 Retained cash flow: debt	ratio	2	0.54	0.18	0.11	0.10	0.13	0.12
16 Gearing: D/RCV	%	2	25.45	36.41	43.42	45.87	46.96	47.89

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL RETURN - BOARD'S OVERVIEW

TABLE D - WATER SERVICE: KEY SUPPORTING INFORMATION (TOTAL)

DESCRIPTION	UNITS	DP	REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10	REPORTING YEAR 2010-11	REPORTING YEAR 2011-12	REPORTING YEAR 2012-13
A OPERATING EXPENDITURE/PROPERTY ANALYSIS								
1 Base service - operating expenditure/property served	£/prop	2	128.35	130.39	96.65	116.76	100.38	92.85
2 Enhanced service - additional operating expenditure/property served	£/prop	2	0.00	0.00	0.00	0.02	0.03	0.34
3 Improving and maintaining supply demand balance – additional operating expenditure/property served	£/prop	2	0.00	0.00	0.00	0.02	0.22	0.24
4 Quality enhancements - additional operating expenditure/property served	£/prop	2	0.00	0.07	0.42	0.02	0.37	1.03
5 New outputs/obligations – additional operating expenditure/property served	£/prop	2	0.00	0.00	0.00	0.00	0.00	0.00
6 Water service - total operating expenditure/property served	£/prop	2	128.35	130.46	97.06	116.82	100.99	94.46
B CAPITAL EXPENDITURE/PROPERTY ANALYSIS								
7 Base service - capital maintenance expenditure/property served (infra and non-infra)	£/prop	2	52.70	75.67	53.03	45.09	62.47	51.13
8 Enhanced service - additional capital expenditure/property served	£/prop	2	7.99	43.86	18.19	5.89	7.64	4.11
9 Improving and maintaining supply/demand balance - additional capital expenditure/property served	£/prop	2	21.04	83.46	33.77	28.89	21.51	19.21
10 Quality enhancements - additional capital expenditure/property served	£/prop	2	21.16	65.22	26.65	14.44	16.30	13.10
11 New outputs/obligations – additional capital expenditure/property served	£/prop	2	0.00	0.00	0.00	0.00	0.00	0.00
12 Water service - total capital expenditure/property served	£/prop	2	102.89	268.22	131.64	94.31	107.92	87.55
C CAPITAL WORKS ACTIVITY								
17 Length of new, renewed or relined mains	km	2				295.66	562.11	374.47
D WATER BALANCE								
18 Distribution input (inc. PPP)	MI/d	2	614.45	632.71	623.24	625.15	583.93	558.82
19 Total leakage	MI/d	2	156.52	180.93	186.86	176.97	168.23	161.75
20 Total water savings achieved/assumed	MI/d	2	0.00	0.02	0.04	0.27	0.26	0.23
21 Water delivered	MI/d	2	498.10	496.50	477.89	489.83	459.03	441.02
22 Security of supply index (planned levels of service)	nr	0	-26	42	88	97	100	100
23 Security of supply index (reference levels of service)	nr	0	-26	42	88	97	100	100
E METERING								
24a Number of non household meters renewed	nr	0			779	5814	8,722	4,653
25 Meter optants installed	nr	0	0	0	0	0	0	0
25a Meter optants installed- non household	nr	0			26	40	67	45
26 Selective meters - installed	nr	0	0	0	3945	4427	3,458	3,078
26a Selective meters - installed- non household	nr	0			907	1071	747	692
27 Percentage of households metered	%	2	4.6	0.0	0.0	0.0	0.0	0.00
27a Percentage of non households metered	%	2			81.1	83.4	85.2	86.39
F OTHER KEY SUPPORTING INFORMATION								
29 Customers on the special assistance register	nr	0	N/C	N/C	546	1,112	1,990	2,675
30 Total revenue outstanding < 48 months as % of annual forecast revenue	%	2	N/C	N/C	0.00			
31 Average connected properties - water (excluding void properties)	000	0	743	755	739	746	753	761

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL RETURN - BOARD'S OVERVIEW

TABLE E - SEWERAGE SERVICE: KEY SUPPORTING INFORMATION (TOTAL)

DESCRIPTION	UNITS	DP	REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10	REPORTING YEAR 2010-11	REPORTING YEAR 2011-12	REPORTING YEAR 2012-13
A OPERATING EXPENDITURE / PROPERTY ANALYSIS								
1 Base service - operating expenditure/property served	£/prop	2	139.71	172.33	157.28	117.33	113.02	115.07
2 Enhanced service - additional operating expenditure/property served	£/prop	2	0.00	0.07	0.56	0.00	0.01	0.39
3 Supply/demand balance - additional operating expenditure/property served	£/prop	2	0.95	0.78	1.60	0.16	0.16	0.67
4 Quality enhancements - additional operating expenditure/property served	£/prop	2	0.15	1.65	2.34	0.21	0.45	0.57
5 New outputs/obligations - additional operating expenditure	£/prop	2	0.00	0.00	0.00	0.00	0.00	0.00
6 Sewerage service - Total operating expenditure/property served	£/prop	2	140.81	174.83	161.78	117.7	113.64	116.70
B CAPITAL EXPENDITURE/PROPERTY ANALYSIS								
7 Base service - Capital expenditure/property served (infrastructure and non-infrastructure)	£/prop	2	46.98	55.19	68.80	45.15	92.98	80.69
8 Enhanced service - additional capital expenditure/property served	£/prop	2	79.16	45.21	33.08	14.51	6.93	4.69
9 Supply/demand balance - additional capital expenditure/property served	£/prop	2	70.14	67.80	48.70	31.34	24.97	25.83
10 Quality enhancements - additional capital expenditure/property served	£/prop	2	78.73	127.27	104.00	48.94	46.83	34.99
11 New outputs/obligations - additional capital expenditure	£/prop	2	0.00	0.00	0.36	0.00	0.00	0.00
12 Sewerage service - Total capital expenditure/property served	£/prop	2	275.01	295.47	254.94	139.94	171.71	146.20
C CAPITAL WORKS ACTIVITY								
13 Sewers renovated	km	2	2.96	3.90	2.19	15.66	9.12	3.72
14 Sewers replaced	km	2	12.52	8.24	11.26	11.08	3.66	20.33
15 Total sewers renovated and replaced	km	2	15.48	12.14	13.45	26.74	12.78	24.05
D SEWER FLOODING ACTIVITY								
18 Internal property flooding solved by company action	nr	0	N/C	N/C	185	0	0	1
19 External only flooding problems solved by company action	nr	0	N/C	N/C	N/C	N/C	N/C	0
20 External linked problems solved by company action	nr	0	N/C	N/C	N/C	N/C	N/C	0
21 Reduction in internal flooding due to other causes	nr	0	N/C	N/C	18	-23	-18	-36
E OTHER KEY SUPPORTING INFORMATION								
24 Volume waste water returned	MI/d	2	382.57	347.82	337.63	328.19	319.98	318.69
25 Average connected properties - sewerage (excluding void properties)	000	0	628	624	605	608	614	618

Chapter 1

Key Outputs and Service Delivery

Tables A and B

Water Levels of Service

Water Quality

The 2012 compliance levels for drinking water at the customer tap are at some of their highest levels, with a Mean Zonal Compliance (MZC) of 99.80%.

The compliance for 2012 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%.

Low Pressure (DG2)

The PC10 Final Determination for the period April 2010 to March 2013 set a target of 800 properties to be removed from the DG2 Low Pressure Register through "company action".

In 2012/13 we removed 297 properties from the register of properties at risk of receiving low water pressure. The total removed over the PC10 period was 842 properties, leaving around 1,400 on the register.

Unplanned Interruptions to Supply (DG3)

The level of unplanned supply interruptions experienced by customers over 2012/13 was impacted by electricity supply failures during the period of severe weather in March 2013. The 12 hour and 24 hour targets would have been achieved if the impact of the electricity supply failures was removed.

Additional detail relating to NI Water's delivery of PC10 water outputs can be found in Table 11 company commentary.

Wastewater Quality

We achieved the target for the calendar year 2012¹ of 96.5% of the population served by compliant wastewater treatment works.

NI Water recognises the damage that can be caused to our environment through water pollution incidents. We are committed to reducing the number of our pollution incidents through our Pollution Reduction Strategy and Action Plan.

There were 18 high and medium severity pollution incidents attributed to NI Water in 2012, against a target of no more than 48.

Around £162m of capital investment was delivered during 2012/13. This included the completion of 25 wastewater treatment works, remediation of 38 unsatisfactory intermittent discharges and laying approximately 375km of new and replacement water mains.

¹ 2013 actual performance not yet available as measured on a calendar year basis.

Over the 2010-13 Price Control (PC10) period we invested around £517m across the following areas (based on UK GAAP nominal prices excluding grants and contributions):

- £254m to maintain our water and sewerage network and our treatment works;
- £121m to support new customers and additional demand from existing customers;
- £113m on drinking water and environmental improvements to protect our local biodiversity; and
- £29m to enhance our customer service such as reducing internal flooding, low pressure and supply interruptions.

Additional detail relating to NI Water's delivery of PC10 wastewater outputs can be found in table 16 company commentary.

Customer Billing and Contact

We achieved the 5 day target response time for billing contacts (DG6) at 100.09%² against the target of 99.90%.

Accurate measured bills are central to customer account management and we had a series of performance targets for meter reading and measured billing in 2012/13:

- 97.5% of bills to be based on actual meter reads – we achieved 98.7%;
- 95% of bills to be issued within 5 working days of a meter reading (both including and excluding any readings that require investigation). We successfully achieved both targets: 97% excluding readings requiring investigation and 95% including readings requiring investigation.

We are helping customers understand their bills and reduce billing queries – in 2012/13 we made a 14% reduction in the number of times our customers needed to call us about their bills.

A new web self-serve portal has been developed over 2012/13 and will be available to customers in 2013/14. The portal will include an account overview, billing and consumption histories, the ability to pay bills and to change account details online.

We continue to work on billing improvements for our customers. In 2012/13 this included both a new bill format which will be easier for all customers to understand and the implementation of a new case management system to improve our management and turnaround time of customer billing-related contacts. Improvements to billing options available for those customers who have multiple sites were also implemented with plans for further improvements in 2013/14.

² Actual performance is greater than 100% due to the basis on which the target is measured.

Substantial efforts have been made to drive down call volumes. We met our target of no more than 265,000 calls in 2012/13, receiving around 219,339.

We achieved our 2012/13 targets 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 to a significant increase in unexpected calls received during the June 2012 flooding events, giving a performance of 98.45% against a target of 99%.

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 introduced a High Volume Call Answering (HVCA) solution in 2012/13. HVCA has been developed to handle substantial unexpected call volumes and also to provide information to customers on their areas.

We achieved the 10 day target response time for complaints with a performance of 99.78% against the target of 98.5%.

Customer surveys

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

The surveys were completed in quarters 2 to 4, achieving an overall average score of 4.54 out of 5. While the performance was below the target of 4.70, we saw an improving trend in 2012/13 with a quarter 4 score of 4.59.

Health and Safety

We surpassed our 2012/13 Health and Safety KPI target of not more than 8 incidents where staff were absent from work for more than 3 days as a result of an incident at work, with 6 incidents incurred. The Health and Safety KPI target for 2013/14 has been set at not more than 7 incidents.

NI Water is celebrating for the third time after winning the prestigious Gold Achievement Award in the Royal Society for the Prevention of Accidents (RoSPA) Occupational Health and Safety Awards 2012.

NI Water continuously monitors and reviews all incidents and near misses to ensure that prompt action is taken to prevent reoccurrence, and lessons learned are quickly communicated across the organisation both internally and to our contractors.

Chapter 2

Financial Performance Measures

Table C

The Directors of NI Water are required to prepare financial statements which comply with the requirements of Condition 'F' of the Instrument of Appointment (the Licence) and with the Regulatory Accounting Guidelines.

Financial results (from Statutory Accounts)

Revenue was £425.6m for the year to 31 March 2013 (2012: £413.3m). Included in revenue was £302.6m (2012: £289.3m) received from the DRD (Subsidy £281.7m; Road Drainage Charges £20.9m) – the increase in the customer subsidy was primarily driven by retail price inflation³.

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

Operating expenses in 2012/13 of £229.3m (2012: £221.5m) increased from last year. The increase primarily resulted from higher capital charges on our increasing asset base and higher power costs. These increases were offset in part by lower staff costs and lower other operating expenses, along with more of our own work being allocated to capital investment.

Results from operating activities before interest for the year was £196.5m (2012: £192.0m).

The net finance costs are primarily due to interest on our borrowings of £40.3m (2012: £38.2m) and PPP liabilities of £21.8m (2012: £21.7m) offset by income on our financial assets of £7.3m (2012: £7.4m).

The tax charge for the year was £25.2m (2012: £18.8m). The effective tax rate for the year to 31 March 2013 was 18.5% (2012: 14.1%).

The Board will consider a proposal to declare a dividend of £29m in July 2013.

Total assets increased by 6.7% to £2,419.5m (2012: £2,267.9m). Our net debt⁴ figure was £1,082.8m at 31 March 2013 (2012: £1,034.6m). Gearing (the ratio of equity to equity and liabilities) increased to 40.9% (2012: 40.4%).

The main movements in the financial position items were increases in property, plant and equipment of £143.6m (2012: £164.5m) relating to our Capital Investment Programme offset by increases in net debt.

³ Customer tariffs were based on the retail price inflation in November 2012 at 5.2%.

⁴ Refer to notes 18 and 20 in the Statutory Accounts. Net debt consists of loans of £882.6m (2012: £807.6m) and finance leases of £221.1m (2012: £230.1m) less cash and cash equivalents of £20.9m (2012: £3.1m).

Liquidity

Operating activities generated a net cash inflow of £203.8m (2012: £200.5m). Net cash outflows of £164.8m (2012: £190.7m) related to investing activities. Net financing activities created a cash outflow of £21.2m (2012: inflow of £22.7m).

Investing activities included the acquisition of property, plant and equipment of £166.1m (2012: £191.1m), proceeds from the sale of property, plant and equipment of £1.2m (2012: £0.3m) and interest received of £0.1m (2012: £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).

Dividends paid to the DRD during the year totalled £27.0m in respect of the previous financial year.

Regulatory Capital Value

NI Water's closing RCV and the RCV roll forward from the 2011/12 closing balance is set out in NI Water's Regulatory Accounts.

Pensions

The pension scheme is broadly in balance with a deficit value of £5.3m at 31 March 2013 (2012: surplus of £9.5m). This was made up of a total market value of assets of £155.8m (2012: £130.2m) less actuarial value of liabilities £161.1m (2012: £120.7m). The movement to a deficit has been driven by a reduction in the discount rate and an increase in the inflation assumptions leading to the increase in liabilities. This has been partially offset by better returns on the assets than expected.

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 2013 is £115.09m and £99.84m respectively (2012: £116.25m, £102.84m). The amount included in PPP Creditors at 31 March 2013 is £97.53m (2012: £101.21m).

Project Omega

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

The cost and net book value of assets included in Property, Plant and Equipment at 31 March 2013 is £140.49m and £123.86m respectively (2012: £139.96, £127.53m). The amount included in PPP Creditors at 31 March 2013 is £119.46m (2012: £124.15m).

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 Waste 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. The cost and net book value of assets included in Property, Plant and Equipment at 31 March 2013 is £11.98m and £7.25m respectively (2012: £11.98m, £7.60m). The amount included in PPP Creditors at 31 March 2013 is £4.11m (2012: £4.75m).

2012/13 PPP Cash Payments

On Balance Sheet	£k
Alpha	
Opex	1,845
Interest	11,913
Total P&L Impact	13,759
Capital Repayment	3,675
Life Cycle Maintenance	490
Total Balance Sheet Impact	4,165
Total Unitary Charge	17,924

Effective Interest Rate used to calculate Alpha finance charge	5.8%
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Off Balance Sheet	Omega (£k)	Kinnegar (£k)
Opex	24,636	1,852
Residual Interest	3,053	250
Total Unitary Charge	27,689	2,102

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.

Chapter 3

Key Supporting Information

Tables D and E

Capital Works Programme

Full details of NI Water's 2012/13 investment activities can be found in the commentaries for AIR tables 35 and 36.

Water Service

In 2012/13 we invested £69m (excluding PPP) in water service activities and outputs.

This included:

1. Base Maintenance

- £22.5m (net) in water infrastructure renewals, including:
 - 285km of water mains renewed;
 - 8,566 communication pipes replaced (excl. lead replacement).
- £15.9m (gross) in the maintenance of water non-infrastructure assets. The company has:
 - invested at a variety of sites/assets under our refurbishment programme;
 - invested in management and general activities to maintain non-operational assets including improvements to IT systems, office rationalisation and vehicle fleet replacement;
 - invested £3.9m in water treatment works upgrades. The main sites included in this investment were Clay Lake, Killyhevlin and enhanced site security at multiple sites;
 - installation of water meters and separations (£1.6m).

2. Enhancement

- £10.0m in water service quality programmes, including renewed and upsized mains as part of the water rehabilitation programme;
- £9.2m providing security of supply projects;
- £0.2m on growth projects as part of the supply-demand balance work;
- £3.5m for the Strule intake project;
- £8.3m in supply/demand programmes relating to new development (provision on new supplies/connections). We have connected 4,349 new properties; (4,154 household and 195 non-household).

Leakage

In 2012/13 we bettered our leakage reduction target by 6.25 million litres per day, saving water equivalent to around two Olympic sized swimming pools each day.

Water Resources, Supply and Demand

We operate around 30 water sources⁵ which comprise upland impounding reservoirs, boreholes, rivers and loughs.

Our 2012 Water Resource Management Plan (which still reflects the company's position relating to water resources) emphasises the need to further reduce water losses from the system whilst continuing to increase our system connectivity. This will allow us to increase the robustness of the network and meet our needs in a cost effective and reliable manner.

Supply and demand, at the overall level and at WRZ level, continues to be in balance whilst in normal operating conditions. This assumes that the requested capital investment on the trunk main linking Cookstown to Cabragh goes ahead as scheduled in PC15. There may be some intrazonal issues in the transportation of water but investigations as to the investment required in PC15 to mitigate this are underway.

There have been no restrictions imposed through a shortage in water resource in the previous 12 months. Nevertheless, the water efficiency message continues to be promoted to customers through the work of the Education Team and the NI Water website. Visits are made to Primary Schools in the travelling classroom - the "Waterbus". This work is supported by visits by the Education Team to classrooms and by school visits to Water Treatment Works, Silent Valley and the Heritage Education Centres.

The efficient use of water is encouraged within the community, through presentations to groups at external events. The promotional material distributed in support of the initiative include educational leaflets, five minute shower timers, trigger guns for hoses, hippo bags for toilets, gel bags for planters, aerated shower heads and aerated tap inserts.

We installed a total of 8,087 meters in 2012, of which 1,439 were 'selectives' and 112 'optants'.

⁵ In addition, there are a further 4 sources operated on behalf of NI Water by a Public Private Partnership (PPP) contractor.

Sewerage Service

In 2012/13 we invested £93m (excluding adopted and nil cost assets) of capital expenditure in sewerage service activities and outputs.

This included:

1. Base Maintenance

- £8.6m (net) on sewerage service infrastructure renewals.
- £41.2m (net) on maintenance of non-infrastructure assets, including:
 - £9.1m at wastewater treatment works (plus a further £4m at smaller works);
 - approximately £5.5 million in management and general activities to maintain assets including operational fleet, office rationalisation and IT projects;
 - £8.0m replacing sewerage non-infrastructure assets – primarily as reactive maintenance.

2. Enhancement

- £21.6 million in sewerage service quality programmes, including:
 - small WwTW programme invested £0.4m in quality enhancement;
 - 1 SBP carryover project (STW/025).
 - 4 additional outputs. The Drumaness WwTW project nominated as part of the additional outputs programme was completed in 2010/11 but not claimed in previous years. A further 5 WwTW Quality projects (41-45) were completed during PC10 which were not included as part of the monitoring plan were also reported in 2012/13.
- The PC10 Monitoring Plan includes a target of 68 UID improvements for the 3-year period. NI Water has substantially exceeded the number of UIDs improved in PC10, with 20 UID improvements in 2010/11, 43 in 2011/12 (excluding UID 114) and 38 (including additional unnamed UIDs) in 12/13.

Public Private Partnerships

NI Water's Public Private Partnership (PPP) programme construction phase was completed in 2009/10 and all contracts have been in full operational service throughout the year. Details of any contractual performance failures are provided in the company commentary for AIR table 42.

Sustainable Procurement

NI Water has developed a Sustainable Procurement Action Plan with the key objectives identified below. Each objective has a number of measures with defined implementation dates and progress towards implementation is well advanced in a number of areas.

- To maintain a Sustainable Procurement Framework that reflects sustainable development strategic priorities and integrate these within the procurement process, where appropriate.
- To make sustainable procurement an integral part of NI Water procurement activity by embedding sustainable procurement principles within procurement processes for the acquisition of goods, services and capital works, where appropriate.
- To engage with key supply markets to secure capacity and capability within the marketplace to deliver sustainable development priorities.
- To increase access and opportunities for Small and Medium Enterprises (SMEs) and Social Economy Enterprises (SEEs) through the tender process or participation in supply chains.
- To set clear and measurable targets on sustainable procurement for NI Water.

NI Water intends to arrange training and development for all staff to provide awareness of sustainable procurement principles and practices. As part of this process, NI Water may appoint sustainable procurement advisors to ensure that full consideration is given to sustainable procurement in tendering and contracting for its goods, services and capital works requirements.

Chapter 4 Efficiency

NI Water's performance has been benchmarked against the comparator water and sewerage companies in England and Wales.

We delivered a £12m reduction in our everyday running costs in 2012/13 and outperformed the PC10 operating costs by £20m⁶. The efficiency gap with the average of our comparator group reduced to 24.8% in 2011/12.

The efficiency gap with the most efficient water and sewerage companies in this comparator group (the frontier companies) is shown below:

Operating cost efficiency gap:

Year	2007/08	2008/09	2009/10	2010/11	2011/12
Gap to frontier	48.7%	43.2%	39.7%	38.1%	31.7%

The 2012/13 efficiency gap is not yet available.

Business Improvement Programme

The PC10 Business Improvement (BI) Programme delivered improvements for NI Water customers in service as well as lowering operational costs. Work has commenced to complete a PC10 BI Programme Closure Report. Claimed benefits, both financial and non-financial, will be independently validated. The report will be completed in the Autumn of 2013.

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 1,300 in 2012/13, while at the same time delivering operational efficiency targets. The operational cost efficiency targets for the PC13 period are extremely challenging. A significant internal control issue surrounds the capacity of NI Water to achieve the efficiency targets while maintaining its essential services to customers and protecting the environment. 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.

⁶ In addition to the reduction in running costs. Based on the PC10 Final Determination and using a different methodology to the reduction in running costs.

Chapter 5 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 2013

Section 2

Tables and Commentary

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

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

DESCRIPTION	UNITS	DP	1		2		3		4		5		6			
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR			
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG	2012-13	CG		
A HOUSEHOLD - LEAKAGE																
1	Number of household supply pipes repaired	nr	0		495	C5	975	B3	1,114	B3	2,392	B2	2,286	B2	1,360	B2
2	Number of household supply pipes repaired free	nr	0		0	A1	0	A1	0	A1	37	B2	0	A1	0	A1
3	Number of household supply pipes repaired - subsidised	nr	0		0	A1	0	A1	0	A1	0	A1	0	A1	0	A1
4	Number of household supply pipes replaced	nr	0		0	A1	0	A1	0	A1	0	A1	0	A1	0	A1
5	Number of household supply pipes replaced free	nr	0		0	A1	0	A1	0	A1	0	A1	0	A1	0	A1
6	Number of household supply pipes replaced - subsidised	nr	0		0	A1	0	A1	0	A1	0	A1	0	A1	0	A1
7	Total savings achieved/assumed	Ml/d	2		0.00	C5	0.00	A1	0.00	A1	0.05	B3	0.00	A1	0.00	A1
8	Total cost of initiative	£000	2		0.00		0.00	A1	0.00	A1	10.73	C3	0.00	A1	0.00	A1
B HOUSEHOLD - WATER EFFICIENCY METHODS																
9	Number of cistern devices distributed to households	nr	0		188	C5	2,472	B3	2,813	B3	2,536	B3	2,946	B3	2,616	B3
10	Number of cistern devices installed	nr	0		0	A1	494	B4	800	B4	1,215	B4	1,423	B4	1,154	B4
11	Total savings achieved/assumed	Ml/d	2		0.00	A1	0.02	B4	0.02	B4	0.04	B4	0.04	B4	0.04	B4
12	Total cost of initiative	£000	2		N/C		1.66	B3	1.60	B3	1.45	B3	1.68	B3	1.49	B3
13	Number of water butts distributed to households	nr	0		N/C		0	A1	0	A1	0	A1	22	B2	60	B2
14	Number of water butts installed	nr	0		N/C		0	A1	0	A1	0	A1	22	B3	60	B3
15	Total savings achieved/assumed	Ml/d	2		N/C		0.00	A1	0.00	A1	0.00	A1	0.00	B4	0.00	B4
16	Total cost of initiative	£000	2		N/C		0.00	A1	0.00	A1	0.00	A1	0.84	B3	2.29	B3
17	Number of water audit packs distributed to households	nr	0		N/C		660	B3	3,028	B3	1,967	B3	4,489	B3	1,685	B3
18	Total savings achieved/assumed	Ml/d	2		N/C		0.00	B3	0.02	B4	0.01	B4	0.03	B4	0.01	B4
19	Total cost of initiative	£000	2		N/C		0.53	B3	0.75	B3	0.37	B3	0.33	B3	0.05	B3
20	Number of water audits carried out by the company in households	nr	0		N/C		500	B1	0	A1	0	A1	0	A1	0	A1
21	Total savings achieved/assumed	Ml/d	2		N/C		0.00	B4	0.00	A1	0.00	A1	0.00	A1	0.00	A1
22	Total cost of initiative	£000	2		N/C		7.57	B2	0.00	A1	0.00	A1	0.00	A1	0.00	A1
C NON HOUSEHOLD - WATER EFFICIENCY METHODS																
23	Self water audit packs distributed to commercial customers by co.	nr	0		N/C		0	A1	277	B3	319	B3	349	B3	323	B3
24	Total savings achieved/assumed	Ml/d	2		N/C		0.00	A1	0.00	B4	0.00	B4	0.00	B4	0.00	B4
25	Total cost of initiative	£000	2		N/C		0.00	A1	0.05	B3	0.06	B3	0.07	B3	0.06	B3
26	Water audits at commercial premises completed by co. or agent	nr	0		N/C		4	B1	0	A1	0	A1	0	A1	0	A1
27	Total savings achieved/assumed	Ml/d	2		N/C		0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1
28	Total cost of initiative	£000	2		N/C		0.17	B3	0.00	A1	0.00	A1	0.00	A1	0.00	A1
D TOTALS																
29	Total savings achieved/assumed	Ml/d	2		0.00	C5	0.02	B4	0.05	B4	0.27	B4	0.26	B4	0.23	B4
30	Total cost of initiatives	£000	2		81.23	B4	84.77	B3	74.39	B3	78.09	B3	91.80	B3	81.90	B3
E OTHER WATER EFFICIENCY METHODS																
31a	Water Efficiency Publications - leaflets etc.	£	0		N/C		846	B3	1,679	B3	1,647	B3	2,122	B3	2,207	B3
31b	Water efficiency Promotional Material - magnets etc.	£	0		N/C		5,670	B3	5,142	B3	3,007	B3	26,158	B3	9,520	B3
31c	Water Efficiency Devices - shower timers etc.	£	0		N/C		4,666	B3	7,944	B3	5,071	B3	4,577	B3	9,527	B3
31d	Water Efficiency Education - Water Bus etc.	£	0		N/C		63,662	B3	57,218	B3	55,754	B3	56,029	B3	56,759	B3
31e	Water Efficiency-Softer Measures as per UKWIR-savings included below	Ml/d	2								0.17	B3	0.19	B3	0.18	B3
32	Total savings achieved/assumed	Ml/d	2		N/C		0.00	B4	0.01	B4	0.17	B3	0.20	B3	0.18	B3
33	Total cost of initiative	£000	2		N/C		74.85	B3	71.98	B3	65.48	B3	88.89	B3	78.01	B3

Table 1 – Key Outputs – Water Service 1

Introduction

NI Water continues to operate a Leakage Notice Procedure in accordance with the Water & Sewage Services (Northern Ireland) Order 2006 whereby a customer with a supply pipe leak receives a notice, which currently gives 28 days for repairs to be completed by the customer. If the repair is not completed by the customer then a Failure to Comply Notice may be served and indeed a repair undertaken by NI Water, the cost of which is passed on to the customer.

In relation to supply pipe repairs, GB water companies operate a free/subsidised domestic supply repair/replacement policy with company specific restrictions. NI Water is currently not funded to operate a free/subsidised domestic supply pipe repair/replacement policy. The focus for the repair of customer supply pipes remains through the application of the Leakage Notice procedure.

As identified last year the company has previously undertaken a review of the viability of implementing a free or subsidised repair/replacement supply pipe policy. The associated report concluded that this is not a cost effective option compared to the marginal cost of water. A copy of this report was submitted to DRD Water Policy Unit. The adoption of such a policy is not within the remit of NI Water.

Line 1 – Number of Household Supply Pipes Repaired

NI Water utilises a Leak Notice Database to collate all information related to the issue and repair of each private side defect located through Leak Detection activities. The company continues to work closely with customers as part of the Leak Notice process by offering assistance on site to locate leaks and offer appropriate advice on their repair.

NI Water recognised that in previous years some non-domestic properties were included in the submitted annual returns. During this reporting year amendments have been made to the Leak Notice database to ensure that this is accurately captured and reported on.

Lines 2 - 8 – Number of household supply pipes repaired free

NI Water does not operate a free/subsidised repair/replacement policy for leaking customer supply pipes therefore there is no appropriate information for these lines.

Costs

Household - Leakage: No 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.

Lines 9- 22 - Household - Water Efficiency Methods

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 per cent 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 due to budget constraints.

- Energy Waste Showcase at CAFRE College(April)
- Mount Stewart Garden Show (May)
- Balmoral Agricultural Show (May)
- Pensioners Parliament (May)
- Water Saving Week -11th-18th June, at Newtownards Shopping Centre
- Greenmount Centenary Show (June)
- National Trust Properties-Mount Stewart, Castlewellan- August
- European Heritage Open Day –September
- Early Years Conference
- Lisburn Parenting Forum
- Newtownabbey Sure Start Fair
- Winter Planning for Older People-Be Safe and Sound(Greysteele),
- Belfast City Council Winter Readiness Clinic-Belfast City Hall
- Winter Ready Clinic (Volunteer Now)- Donegall Pass, Ballysillan Leisure Centre, Iverary, Anderstown Leisure Centre
- Eco schools Celebration

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

School environmentally focused days at “Environment Day” (North Down Borough Council for primary schools) and “Global Village” (Ballyclare High School).

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

- Homestart - mother and toddler groups
- Volunteer Now- Belfast groups
- Help the Aged
- Rotary and Probus groups
- Church groups
- RNIB various 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".

Lines 9-12: Household Cistern Devices

Cistern displacement devices (CDD's) can be requested by the customer directly through NIW's Customer Relations Centre (CRC) or from communication to the Education Team. For 2012/13 the figure requested was 187. NI Water has distributed 2429 CDD's by other means: 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 table shows the number of CDD's distributed in 2012/13.

Month	School Visits	Community Visits	Shows/ Competitions	Requested Schools	Requested Community	Business Use	Monthly Total
April 12	34		71*		93		198
May 12	40	45	136		1		222
June 12	22		666*	50	5		743
July 12		12			1		13
Aug 12			234		60	150	444
Sept 12	33	66	71			30	200
Oct 12	38	80	85	10	1		214
Nov 12	38	46	40		20		144
Dec 12	18	106	8	28	1	7	161
Jan 13	27	35		10	3		77
Feb 13	40						40
Mar 13	33	77	43				153
Annual Total	323	467	1354	100	185	187	2616

*- Radio competitions

The calculation for the water savings achieved in 2013/12 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 2.5l/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 NIW. An installation rate of 20% was due to the distribution method used i.e. through shows and events. Occupancy rate was 2.5 from NISRA.

Calculation:

$$2.5 \times 2.5 \times 5 \times (1354 \times 0.2) = 8462.5 \text{ l/per day} = 0.008463 \text{ MI/d}$$

70% installation rate for those from CRC requests, community requests, those given to schools and community talks with a total of (1262),

Volume displaced per flush, flushes per person per day occupancy as above.

Calculation:

$$2.5 \times 2.5 \times 5 \times (1262 \times 0.7) = 27606.25 \text{ l/per day} = 0.0276063 \text{ MI/d}$$

Giving a total of 0.0361 MI/d, a very slight decrease from 0.0373MI/d the previous year. The cost of the initiative was calculated by multiplying the no of hippo bags 2616 by the cost per bag giving £1,491.12.

Lines 13-16 Water Butts Distributed to Households

For the report year 2012/13 NI Water have not distributed water butts to households. NI Water has promoted the use of water butts through leaflet distribution. During Dec-Feb, the company re designed and launched its water efficiency web pages. As part of the launch of re-designed water efficiency pages, NIW ran two competitions one in April: 20 waterbutts and efficiency bags were given out, the other during Water Saving Week 20 waterbutts and goodie bags were won, 30 runners up got water efficiency goodie bags. 5 were allocated to Belfast City Council Community Allotment at Musgrave Park.

The table shows the number of water butts distributed:

Month	School/Spread the word/ Prizes	Community Visits	Requested Community	Monthly Total
April 12	20			20
May 12				
June 12	20	5	6	31
July 12				
Aug 12	1			1
Sept 12				
Oct 12				
Nov 12	3			3
Dec 12		2		2
Jan 13		1		1
Feb 13	2			
Mar 13				
Annual Total	46	8	6	60

The calculation for the water savings achieved in 2012/13 report year is as follows:

$$S = V \times F \times I \times N$$

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 60, 190l butts) the fills per year is estimated at 6 and the installation rate is 100%.

Calculation:

$$190 \times 6 \times 1 \times 60 = 68400 \text{ l per year}$$

$$68400 / 365 = 187.39726 \text{ per day} = 0.0001873 \text{ MI/day}$$

The cost of the initiative was calculated by multiplying the no of water butts awarded as prizes 60 by the cost per water butt giving £2,289.75.

Lines 17- 22 Water Audits: Household

During 2012/13 the self water audit for domestic households which can be accessed through the company's website, there have been 535 hits to the on line audit. A link has now been introduced at intervals on the home page. An advantage of the website self water audit is that as soon as the customer completes the form the information is emailed directly to WET and this data can then be collated in a spreadsheet to accumulate water usage across NI Water's customer base.

Domestic Self Water Audit Packs

Over the report year 2012/13 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 2013 to return the completed audits.

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 to be 70%. It has been assumed that completed audit achieved savings of 10 litres per property per day.

D*A*S = Savings in litres

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

The number of audits distributed was 758 through schools, 254 at events or shows and 138 through Staff Water efficiency stands making a total of 1150 (see page 9).

Calculation:

$$1150 * 0.70 * 10 = 8050 \text{ l/per day} = 0.00805 \text{ MI/d}$$

From the figures supplied by IT division of the Corporate Affairs Team, 535 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:

$$\text{Calculation: } 535 * 0.10 * 10 = 535 \text{ l/per day} = 0.000535 \text{ MI/d}$$

Total savings figure for domestic audits 0.008585 MI/d

The total number of audits is the addition of the number of audits distributed through 'Spread the Word' (758) plus the number distributed at events (254) plus the number distributed to staff (138) plus the number of visitors to the online audit (535), giving a total 1685.

Line 19 cost of “Spread the Word” is the cost of the prizes added to the cost per audit multiplied by the number of audits distributed - £48.30. No top school return prize to date.

Water Audits Completed by Company in Households

No audits were completed in the homes of customers 2012/13.

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 - Water Efficiency Methods

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.

Lines 23-28 Non-Household - Water Audits

During 2012/13 323 Water Audits for Schools were distributed by WET through Teachers Packs.

No Commercial Audits were distributed as the document was revised to become an advice leaflet for business customers during the year “Advice for Business Customers”. This will be further upgraded in the coming year by adding a water audit to be distributed to business customers on the lower tariff charge to begin with.

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: $323 * 0.20 * 10 = 646$ l/per day = 0.000646MI/d

Cost is the number of school audits multiplied by their cost £63.47

Totals

Lines 29-30 Totals

Savings

These savings have been achieved through Section B (Household-Water Efficiency Methods), Section C (Non Household-Water Efficiency Methods) and Section E (Other Water Efficiency Methods).

The total recorded savings for Sections B, C and E is **0.227**MI/d

NI Water do not operate a free/subsidised repair/replacement on supply pipes, therefore no savings where obtainable from Section A, (Household- Leakage)

Efficiency Method	Savings per MI/ day	Initiative cost £
Household B		
Cistern Devices	0.0360687	1491.12
Water butts	0.0001873	2289.00
Self Water audits	0.008585	48.30
Non Household C		
School/Commercial Audits	0.000646	63.47
Other Methods E		
Shower timers	0.0051462	9527.13
Gel Bags	0.000005	
Shower heads	0.00116	
Trigger guns (see below)	0.0002365	
UKWIR-Softer Measures (see below)	0.175	included in Education Dept
Leaflets (see below)		2206.59
PR items(see below)		9520.31
Education Dept		56759.00
Total	0.227	81904.92

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

Costs

Household - Leakage: No 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.

Lines 31-33 other 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.

NI Water also 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.

The items and leaflets distributed are shown in the table below:

Efficiency Method	Name	Total	Cost £
Leaflet	Water Butt	724	94.84
	How water wise are you	7257	747.17
	Hippo Bag Leaflet	2616	342.70
	Drought gardening	318	26.08
	Freezing Pipe	58,576	995.79
Total Leaflet			2206.59
PR Item	Bookmark- "Flo" Kids saving water	1505	105.20
	Seeds: Drought Resistant	241	597.68
	Adult Magnet	35	17.08
	Magnet-H2O magnet	5682	1477.32
	Game: Snakes and Ladders	323	57.82
	Stop Tags	9081	3895.75
	Tap cover	326	1506.94
	Ice scraper	2105	1528.23
	Thermometer	438	334.29
Total PR Item			9520.31
Measurable	Shower timers	4475	4922.50
	Gel Bags	200	950.00
	Shower heads	100	2789.63
	Trigger Guns	200	965.00
Total Measureable			9527.13

Over the reporting year 4475 shower timers were distributed at 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 2010/11 report year is as follows:

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

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

Calculation: $4475 * 0.23 * 5 = 5146.25$ l/per day = 0.0051462 MI/d

The gel bags were distributed as part of the radio competition for water saving week and at 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 2012-13 report year is as follows:

D*I *S= Savings in litres

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

Calculation $200*0.25*0.1 = 5$ l/per day= 0.000005MI/d

The majority of the shower heads were distributed at the Balmoral Show 100 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. Installation rate assumed to be 40% at shows and as prizes

The calculation for the savings achieved in 2010/11 report year is as follows:

D*I *S= Savings in litres

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

Calculation $100*0.4*29 = 1160$ l/per day= 0.00116MI/d

The trigger guns were distributed at shows, through competitions and at staff water efficiency stands. (see pages 12). 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 i.e. at staff stands or through CRC.

The calculation for the savings achieved in 2010/11 report year is as follows:

D*I *S= Savings in litres

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

Calculation $91*1*2 = 182$ l/per day= 0.000182 MI/d

If the trigger gun was distributed through competition or shows the installation rate is 25%.

D*I *S= Savings in litres

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

Calculation: $109*0.25*2 = 54.5$ l/per day= 0.0000545 MI/d

Total savings = 0.0065477 MI/day

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.)

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	Litres/day	MI/d
High	159509.3	0.1595
Medium	12640.7	0.0126
Low	3267.6	0.00327
Totals		0.175 MI/d

This shows a slight decrease from last year's figure from 0.1908MI/day to 0.175 MI/day.

During the reporting year 2012/13 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 households 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. The video is highlighted during Water Saving Week (11th -18th June) which promotes water efficiency to the public, encouraging the public to pledge to do one thing to save water for the rest of their life, this was promoted this year at "Ards Shopping Centre" Newtownards over 3 days.

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, and trigger guns along with the literature Domestic Audit "and" How Waterwise are You The figures are recorded in the previous tables. Initially the uptake was good, but slowly petered out as most staff have now selected what they require or are interested in having. This initiative continues. Available for download within the business section of water efficiency is the "Top Ten Tips for Business Water Efficiency".

The recommendations made last year that NI Water were investigated as follows:

- the consideration that using water efficiency partners who provide similar products directly, as predicted, procurement as deemed it is not viable. They raised concerns about using these sites as to whether NI Water will be Liable if the recommended items goes wrong.
- As previously mentioned the Commercial Customer Audit has become an advisory leaflet, during its creations the advice of CCNI was taken into account. This leaflet will be added to during 2013-14 with a water audit.
- We approached the internal DSCT team, who currently approve new connections to NI Water to investigate liaising with developers to promote water efficiency in new premises The DSC team advised that to provide information about water efficiency was not feasible or within their remit. It was agreed that NI Water Domestic Audits and "Protect your Property" leaflets would be introduced onto New Developer packs to support water efficiency. The Housing Executive reported no such information is held by them, they don't manage the properties this is carried out by the Housing Association.
- NI Water now have a link in place to the InvestNI website "InvestNI free resource efficiency support"
- We engaged with the Energy Saving Trust and have met with them on a couple of occasions, taking advice from them and providing Northern Ireland specific data for them to include within their modelling tools. The Energy Saving Trust also verified NI Water's supposition that there are a wide array of benefits to other stakeholders around water efficiency and seeking a partnership approach with these stakeholders should give mutual benefits.

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 campaign ran from September 2012 and was conveyed via various communication channels, Radio (including two radio competitions with U105 106,000 and Q Radio Network 74,000 adults respectively), TV, Press (daily and regional papers) website, social media. The tag line "Two-Step Pipe Check" ran with the generic message of "Frozen Pipes Disrupt Lives".

The "Lag and Tag" message involved the distribution of a florescent "Stop Tap Valve tag" which helped customers to be aware to 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" (379 hits); Insulation (156 hits); Winter Proof Your Home

(115 hits), "How to locate your stop Valve" (106 hits); "If a pipe burst" (59 hits) "Don't Wait Insulate" (77 hits).

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 e.g. 0.0479Ml/day for 2009/10, 0.216 Ml/day for 2010/11, 0.264Ml/day for 2011/12 and 0.227 Ml/day for this year 2012/13 which is attributed to a drop in the number of domestic audits distributed.

Table 2 – Key Outputs - Water Service - 2

Introduction

The PC10 Determination for the period April 2010 to March 2013 set a target of 800 properties to be removed from the Register through 'Company Action'. The cumulative target profile for year 1 (2010/11) was 220 properties, year 2 (2011/12) 520 properties and year 3 (2012/13) 800 properties.

In the 2010/11 and 2011/12 years 283 and 262 properties were removed respectively from the DG2 register through company action. In 2012/13 a further 297 properties were removed resulting in a total of 842 properties being removed. The primary means of achieving these removals has been due to capital investment through watermain rehabilitation schemes.

The company are not in a position to report on the number of properties on the DG2 register served by common supply pipes as such records do not exist.

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 AIR13 has remained the same.

The difference between the AIR12 and the AIR13 figures is 7593. The breakdown can be explained as follows;

- 1) New Connections during the 2012/13 reporting year
- 2) Added as a result of a customer contact. E.g. septic tank empty request, no water complaint 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 aims to close).
 - 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 customer contacts NI Water they quote the verified postal address which is different, therefore creating a duplicate. Another example - The street name may have changed from the time of New Connection to time of customer contact – street names can change in the early stages of site developments.

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 been put in place to address this issue. 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 Integrity 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 2 – Properties below the reference level at start of year

The number of properties on the Register at the start of the year was 1748, as reported in line 3 of the AIR 12 submission.

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

As per the 2013 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 1420.

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 two Post Project Rehabilitation Appraisal (PPRA) reports, see Table 1 below, resulting in 297 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
Ards North & Lough Cowey	129
South Down	168
Total	297

Ards North & Lough Cowey PPRA – This portion of work was developed from the Ards North, Bangor Outer and Lough Cowey Design Zonal Study and was completed between April 2006 and April 2009. A total of 95 km of mains were rehabilitated and as a result of this work 129 properties were removed from the register based on the submission of a DG2 Investigation Report.

South Down PPRA - This mains rehabilitation construction phase was conducted between August 2010 and April 2011. It incorporates a variety of hydraulic, operational and water quality solutions to improve the condition and performance of the distribution network. A total of 119 km of mains were rehabilitated under this work package removing 168 properties from the DG2 register.

The above detail would confirm that in line with the submission included within the company PC10 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 District Meter Areas.

Table 2

Better Information	DG2 Properties Removed
Ards North & Lough Cowey	9
South Down	22
Total	31

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

Table 3

Year Start	1748
Removals due to PPRAs	297
Removals due to better information	31
End of year Total	1420

Line 4 – Properties receiving low pressure but excluded from DG2

As per the NIAUR instruction in 2010/11, properties within 10m are no longer excluded from the DG2 Register. Therefore there are currently 0 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 176 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	297
Infrastructure Improvements	0
	297

The final number of properties removed due to Company Action is recorded in Table 4 above as 297. This has exceeded the yearly target of 255 and determines that the company has surpassed the overall PC10 target of 800 removals from the register as a result of company action by 42.

Lag in Confirming Removal from Register

There is a time lag of approximately one year between the completion of the WP and confirmation that properties can be removed from the register, in general. There will be a longer lag in areas where there is a phase 2 WP under construction, or a neighbouring WP has a significant effect on the normal operation of the system. The PPRAs report for both phases will be completed one year after the phase 2 WP is

complete. This is consistent with the process included in the company PC10 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 2013/14 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 removed.

Table 5

Work Package Name	Construction End Date	No of properties to be removed
WP80 Moyola	13/03/2012	10
WP84 Alleyhill	31/10/2012	7
WP06 Dungonnell	15/02/2012	12
WP72 Ballintemple Phase 1	06/05/2012	41
WP83 Cookstown Phase 2	17/12/2012	5
WP86 Fofanny Banbridge Phase 2	20/02/2012	2
WP89 Cookstown Phase 3	12/04/2012	6
WP93 Ballywonard	15/07/2013	32
WP98 Newtownabbey Phase 2	22/05/2013	3
Sub-Total		118

Work Packages Outstanding 2012/13		
WP79 Dunore West/Tardree P1/Tardree P2	Dec-11	7
WP71 Lough Ross	Jun-12	12
WP14 The Glens	Aug-12	10
	Total	147

Removals Pending

It should be noted that currently 118 properties have been identified for removal from the DG2 register due to the planned completion of PPRA reports during 2013/14 as the direct result of company action via rehabilitation works. However a total of three Work Packages were not completed as planned during 2012/13 namely, WP79 Dunore West/Tardree, WP71 Lough Ross and WP14 The Glens with 29 removals forecasted. Therefore the total number of properties planned for removal during 2013/14 is 147. However these are subject to the completion of rehabilitation works, the collation of appropriate pressure data and the submission of completion reports.

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

The construction work on a number of these Work Packages (WPs) was carried out during the Strategic Business Plan period and, as such, the capital spend is not necessarily within the PC10 period. The reason for the lag period is described below.

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 second year that the company has reported this figure and it will allow the benchmarking of NI Water costs to commence. 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 CIDA allocation rather than directly attributable costs 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.

A single PPRA report covering the South Down WP, Downpatrick WP, and Mourne Coastal WP and the Ards North DIR were produced during 2012-13 which removed a total of 297 properties from the register and resolved 496 modelled LoS failures. These are detailed in Table 7 below.

Table 7

WP Title	DG2 Properties Removed	Total Cost	Modelled Future Level of Services
South Down, Downpatrick, Mourne Coastal	168	£132,966.09	496
Ards North DIR	129	£110,164.26	Not Calculated
TOTAL:	297	£243,130.35	496
Average Cost per DG2 Removal	£818.62		£490.18

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 £243,130 by the total number of properties removed 297.

Average cost per DG2 removal = £819

Comments on Specific Work Packages

A PPRA report was not completed for the Ards North WP as time constraints prevented the work from being completed under the previous consultant appointment and a new consultant has not been selected by mini-competition to undertake this work. Further re-logging is required in the Portavoe Donaghadee DMA due to

unexplained dip in pressure throughout the whole DMA. It was anticipated that properties would be removed from the register due to mains renewal in the DMA.

Confidence Grade Line 4c

A confidence grade of C4 is proposed for this data line.

Lag in Confirming Removal from Register

There is a time lag of approximately one year between the completion of the WP and confirmation that properties can be removed from the register, in general. There will be a longer lag in areas where there is a phase 2 WP under construction, or a neighbouring WP has a significant effect on the normal operation of the system. The PPRA report for both phases will be completed one year after the phase 2 WP is complete. This is consistent with the process included in the company PC10 Business Plan.

Work Packages awaiting PPRA

The following work packages were programmed to have PPRA reports produced but the commencement of these reports were delayed due to outstanding M&E works and DMA boundary changes. The estimated numbers of DG2 properties to be removed were predicted by Hydraulic Modelling. The pressure will be confirmed by logging before formal removal from the register. The table below lists the outstanding WPs and the predicted number of properties removed.

Table 8

Work Package Name	Revised Construction End Date	No of properties to be removed
WP79 Dunore West/Tardree P1/Tardree P2	Dec-11 May-13	7
WP71 Lough Ross	Jun-12-Sep-12	12
WP14 The Glens	Aug-12 Feb-13	10
	Total	29

Removals Pending

It should be noted that currently 29 carry over properties have been identified for removal from the DG2 register due to the planned completion of PPRA reports during 2013/14 as the direct result of company action via rehabilitation works.

Further WP

The WPs listed in the table below are also programmed for completion during the next year and the predicted numbers of removals are listed. In total a further 118 properties have been identified for removal due to the WP schemes.

Table 9

Work Package Name	Construction End Date	No of properties to be removed
WP80 Moyola	13/03/2012	10
WP84 Alleyhill	31/10/2012	7
WP91 Carrickfergus Ph1	14/11/2012	0
WP83 Cookstown Ph2	17/12/2012	5
WP94 Ballysillan	30/01/2013	0
WP06 Dungonnell	15/02/2013	12

Work Package Name	Construction End Date	No of properties to be removed
WP86 Fofanny Banbridge Ph2	20/02/2013	2
WP95 Rasharkin Ph2	27/02/2013	0
WP116 Omagh Ph1	26/03/2013	0
WP89 Cookstown Ph3	12/04/2013	6
WP90 Lisburn North Rural Ph2	23/04/2013	0
WP72 Ballintemple Ph1	06/05/2013	41
WP98 Newtownabbey Ph2	22/05/2013	3
WP93 Ballywonard	15/07/2013	32
Total		118

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 817,960 as confirmed by Customer Systems.

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	2010/11 Freeze/Thaw	2010/11 Freeze/Thaw Excluded	2011/12	2012/13 Adverse Weather Included	2012/13 Adverse Weather Excluded
Table 2: Line 5	More than 3 hours	529,448	47,454	54,303	53,458	51,588
Table 2: Line 6	More than 6 hours	476,289	12,409	7,023	10,487	8,731
Table 2: Line 7	More than 12 hours	214,274	3,997	765	2,607	1,019
Table 2: Line 8	More than 24 hours	40,959	1,846	18	1,554	62

NI Water's DG3 performance in 2012/13 has been heavily influenced by the period of adverse weather and resultant electricity supply failures in March. As such, the Company has reported two sets of outturn figures, one set including the impact of the adverse weather and one set excluding the impact.

Despite the impact of the adverse weather, the number of properties affected by an unplanned interruption lasting more than 3 hours decreased by 845 between 2011/12 and 2012/13.

With the impact of the adverse weather removed, the numbers of properties affected by unplanned interruptions lasting more than 6 hours, 12 hours and 24 hours are still higher than in 2011/12. The higher outturns for properties affected for more than 6 hours and 12 hours can be largely attributed to an incident in February involving a burst on the 12 inch inlet to Greenhill Gauge Tank. The higher outturn for properties affected for more than 24 hours can be attributed to an incident in August involving distribution issues related to Ballykine Lodge Water Pumping Station and Pillar Hill Service Reservoir.

In 2011/12, the Company's DG3 performance was good and all outturns were within the Monitoring Plan targets for PC10. The unusually mild winter helped offset periods of underperformance in the year, with fewer bursts than expected.

In 2010/11, the Company's DG3 performance was heavily influenced by the two freeze/thaw events of December 2010 and particularly, by the impact of supply rotation and service reservoir drain-down. As such, all actual outturns were extremely poor in comparison to the Monitoring Plan targets for PC10.

Planned and Warned Interruptions

AIR	DG3 Properties Affected	2010/11	2011/12	2012/13
Table 2: Line 9	More than 3 hours	27,547	58,162	50,096
Table 2: Line 10	More than 6 hours	10,025	31,808	20,674
Table 2: Line 11	More than 12 hours	0	1,250	0
Table 2: Line 12	More than 24 hours	0	0	0

The numbers of properties affected by planned and warned interruptions lasting more than 3 hours and 6 hours have reduced by 8,066 and 11,134 respectively between 2011/12 and 2012/13. The decrease is primarily due to a decrease in meterage installed under the Water Mains Rehabilitation Programme. Water main distribution meterage installed in 2012/13 was 317km compared to 509km in 2011/12 and 198km in 2010/11.

No properties experienced a planned and warned interruption lasting more than 12 hours in 2012/13 compared to 1,250 in 2011/12 and 0 in 2010/11. NI Water tries to avoid planned and warned interruptions exceeding 12 hours.

For the sixth year in succession, no properties experienced planned and warned interruptions lasting more than 24 hours.

Interruptions Caused by Third Parties

AIR	DG3 Properties Affected	2010/11	2011/12	2012/13
Table 2: Line 13	More than 3 hours	978	1,675	1,778
Table 2: Line 14	More than 6 hours	699	70	561
Table 2: Line 15	More than 12 hours	63	0	1
Table 2: Line 16	More than 24 hours	30	0	0

The number of properties experiencing interruptions caused by third parties lasting more than 3 hours, increased by 697 between 2010/11 and 2011/12 and by 103 between 2011/12 and 2012/13.

The number of properties experiencing interruptions caused by third parties lasting more than 6 hours, decreased by 629 between 2010/11 and 2011/12 but increased by 491 between 2011/12 and 2012/13. In July, a third party contractor damaged a 6 inch PVC main at [REDACTED], Ballyclare. 493 properties experienced an interruption of 8.75 hours as a result.

For the second year in succession, no properties experienced an interruption caused by a third party lasting more than 24 hours in 2012/13.

Unplanned Interruptions (Overruns of Planned Interruptions)

AIR	DG3 Properties Affected	2010/11	2011/12	2012/13
Table 2: Line 17	More than 6 hours	1,418	1,131	311
Table 2: Line 18	More than 12 hours	2	288	60
Table 2: Line 19	More than 24 hours	0	4	0

The number of properties experiencing overruns of planned interruptions lasting more than 6 hours, decreased by 287 between 2010/11 and 2011/12 and by 820 between 2011/12 and 2012/13.

In 2010/11, the majority of properties were affected by a single overrun. In 2011/12 there was an increase in the number of planned interruptions which overran, 25 compared to 10 in 2010/11 and 13 in 2009/10. This increase was attributed to an increase in the overall number of planned interruptions by the Company, including those associated with the Water Mains Rehabilitation Framework. The reduction in 2012/13 is consistent with a reduction in planned interruptions.

2010/11			2011/12			2012/13		
Planned Interruptions >6hrs	Planned Which Overran	%	Planned Interruptions >6hrs	Planned Which Overran	%	Planned Interruptions >6hrs	Planned Which Overran	%
461	10	2.17	1,068	25	2.34	506	9	1.78

The number of properties experiencing overruns of planned interruptions lasting more than 12 hours, increased by 286 between 2010/11 and 2011/12 but decreased by 228 between 2011/12 and 2012/13.

No properties experienced an overrun of a planned interruption lasting more than 24 hours in 2012/13 compared to 4 in 2011/12 and 0 in 2010/11.

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	Outturn Including Early & Late Dec Freeze/Thaws		Outturn Exc. Late Dec Thaw Only (%)	OutturnExc. Late Dec Freeze/Thaw (%)	Outturn Exc. Early & Late Dec Freeze/Thaws (%)	10/11 KPI Target (%)	Outturn		11/12 KPI Target (%)	Outturn Inc. Adverse Weather		Outturn Exc. Adverse Weather		12/13 KPI Target (%)
	10/11 (Props)	10/11 (%)					11/12 (Props)	11/12 (%)		12/13 (Props)	12/13 (%)	12/13 (Props)	12/13 (%)	
>6 hrs	476,289	59.060	2.17	1.83	1.00	1.00	7,023	0.867	0.97	10,487	1.282	8,731	1.067	0.94
>12 hrs	214,274	26.570	0.78	0.51	0.22	0.22	765	0.094	0.21	2,607	0.319	1,019	0.125	0.20
>24 hrs	40,959	5.079	0.31	0.23	0.01	0.01	18	0.002	0.01	1,554	0.190	62	0.008	0.01

Note 1: Percentage outturns are based on total connected properties as follows: 806,444 (AIR11); 810,367 (AIR12); 817,960 (AIR13)

Note 2: Up to and including 2009/10, the number of properties experiencing unplanned and unwarned interruptions included interruptions caused by third parties and unplanned interruptions (overruns of planned interruptions). From 2010/11, third party interruptions and overruns have been excluded.

The yearend outturns for properties affected by unplanned and unwarned interruptions confirm that NI Water has failed all three of its 2012/13 DG3 KPI targets, its > 6 hours target by 2,814 properties (0.344%), its > 12 hours target by 957 properties (0.117%) and its > 24 hours target by 1,474 properties (0.180%). Target failure can be largely attributed to the adverse weather and resultant electricity supply failures in March.

With the impact of the adverse weather removed, NI Water would still have failed its > 6 hours target by 1,058 properties (0.129%). Target failure (*excluding adverse weather impact*) can be largely attributed to an incident in February involving a burst on the 12 inch inlet to Greenhill Gauge Tank.

For more details of the impact of these incidents, see the following sections of the commentary:

- Number of properties affected by interruptions caused by loss of electrical supply
- Major incidents during the report year that NI Water believes adversely affected its DG3 performance.

In 2011/12, all three yearend outturns were better than the KPI Targets. In 2010/11, NI Water failed all three targets, mainly as a result of the severe winter weather.

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 2012/13 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 Props Restored		Duration (Hours)	Properties Affected		
		Date	Time	Date	Time		> 0 Hrs	> 3 Hrs	> 6 Hrs
Unplanned	18772	12/04/12	00:15	12/04/12	03:30	3.25	505	505	0
Unplanned	19254	01/07/12	00:30	01/07/12	04:00	3.5	20	20	0
Planned	EP074	04/08/12	01:00	04/08/12	07:00	6.00	372	372	0
Unplanned	20087	14/09/12	00:00	14/09/12	03:45	3.75	200	200	0
Unplanned	20091	30/10/12	00:00	30/10/12	03:15	3.25	110	110	0
Unplanned	20089	10/10/12	00:00	10/10/12	03:30	3.5	200	200	0
Unplanned	20090	23/10/12	00:00	23/10/12	04:00	4	480	480	0
Unplanned	20021	22/10/12	00:00	22/10/12	06:45	6.75	720	720	5
Planned	EP009	22/10/12	00:00	22/10/12	04:00	4.00	45	45	0
Unplanned	20173	07/11/12	00:00	07/11/12	03:15	3.25	600	600	0
Unplanned	20471	14/12/12	01:00	14/12/12	04:30	3.5	3015	3015	0
Unplanned	20487	14/12/12	01:00	14/12/12	06:30	5.5	36	36	0
Unplanned	21202	28/02/13	01:00	28/02/13	05:00	4	2607	2607	0
Unplanned	21016	01/02/13	00:00	01/02/13	05:30	5.5	300	300	0
Planned	21005	07/02/13	00:00	07/02/13	04:30	4.5	215	215	0
Unplanned	21300	05/03/13	01:00	05/03/13	05:00	4	360	360	0
Unplanned	21451a	23/03/13	02:00	23/03/13	06:00	4	47	47	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.

14 unplanned records and 3 planned records have been identified where customers would not have noticed the loss of service because it occurred at night. 16 of the interruptions lasted 6 hours or less. 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.

$$\text{Unplanned: } (9,200 / 53,458) \times 100 = \mathbf{17.2\%}$$

NI Water reported in its AIR12 commentary that there were 13 unplanned interruptions and 0 planned interruptions where customers would not have noticed the loss of service because it occurred at night. The number of properties affected by these interruptions was 5,316, representing 9.8% of the total number of properties experiencing unplanned interruptions lasting more than 3 hours in 2011/12.

Interruptions of 3 hours or less occurring at night

NI Water has a record of 167 unplanned interruptions, 2 planned interruptions and 1 unplanned third party interruption of 3 hours or less where customers would not have noticed the loss of service because it occurred at night. The numbers of properties affected by these interruptions are 156,493 unplanned, 66 planned and 37 unplanned third party.

NI Water reported in its AIR12 commentary that there were 265 unplanned interruptions and 1 unplanned third party interruption of 3 hours or less where customers would not have noticed the loss of service because it occurred at night. The numbers of properties affected by these interruptions were 164,938 unplanned and 204 unplanned third party.

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

There were 9 overruns of planned and warned interruptions lasting between 3 and 6 hours. The number of properties affected by these overruns was

$$40 + 33 + 1 + 15 + 42 + 22 + 4 + 24 + 77 = \mathbf{258}$$

This number is small compared to the number of properties that experienced a planned and warned interruption of between 3 and 6 hours (29,422).

$$T2: L9 = 50,096$$

$$T2: L10 = 20,674$$

$$50,096 - 20,674 = \mathbf{29,422}$$

NI Water reported in its AIR12 commentary that there were 14 overruns of planned and warned interruptions lasting between 3 and 6 hours. The number of properties affected by these overruns was 575.

The following table provides a summary of all the overruns of planned and warned interruptions lasting between 3 and 6 hours in 2012/13.

Interrupt. No.	Month	Duration (Hours)	Properties Affected		Duration Of Overrun (Hours)
			> 0 Hrs	> 3 Hrs	
19183	May-12	3.75	40	40	0.5
19689	Aug-12	5	33	33	1
19763	Sep-12	4.5	1	1	0.5
19795	Sep-12	4.75	15	15	0.5
19977	Oct-12	5	42	42	1
20104	Nov-12	5.5	22	22	1
20745	Jan-13	3.25	4	4	0.5
21130	Jan-13	3.75	24	24	0.25
20944	Feb-13	4.25	77	77	0.5

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

Interrupt No.	Month	Duration (Hours)	Properties Affected					Comments
			> 0 Hrs	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs	
18763	Apr-12	3.25	13	13	0	0	0	
18852	Apr-12	3.5	22	22	0	0	0	Belcoo (Aghavass Pumps off)
18855	Apr-12	7.75	11	11	11	0	0	Doon Booster Pumps, Derrylin – Elevated
19055	May-12	3.5	5	5	0	0	0	Power outage, Enniskillen
18915	May-12	4.75	12	12	0	0	0	Kinawley
18919	May-12	5	4	4	0	0	0	Mullanavam Pumps – Carnmore Road, Rosslea
19064	May-12	7.5	9	9	9	0	0	Belcoo (Aghavass Booster off)
19352	Jul-12	15.5	445	445	5	1	0	Mains failure at Tullybrannigan HLSR affecting Tullybrannigan High DMA
19477	Aug-12	4	30	30	0	0	0	Power outage caused pumps to trip – Ballygawley
19479	Aug-12	4.5	8	8	0	0	0	NIE power outage
19480	Aug-12	3.5	30	30	0	0	0	NIE power outage – Ballygawley
19654	Aug-12	4	5	5	0	0	0	Glenarm Booster off, Lack
19619	Aug-12	5	34	34	0	0	0	Ballykine Lodge to Pillar Hill SR pumping issue - Elevated properties within the areas of (Ballymacarn DMA)
19557	Aug-12	5.5	1	1	0	0	0	Kinawley (Larganacarron Booster)
20463	Nov-12	3.5	4	4	0	0	0	Glenchuil Pumps
20462	Nov-12	4.5	8	4	0	0	0	Ballygawley (Glenchuil Booster DMA – elevated area)
20716	Dec-12	5	18	18	0	0	0	Killaney Booster, Clogher
20544	Dec-12	5.5	8	8	0	0	0	Glencull WBS – Elevated properties on
20539	Dec-12	6	14	14	0	0	0	Glencull WBS – Elevated properties on
20941	Jan-13	3.25	38	38	0	0	0	Ardbarren Pumps – NIE fault repaired
21522	Mar-13	4	15	15	0	0	0	Clogher – 15 properties on high ground
21596	Mar-13	9.5	131	131	131	0	0	Ballykine Lodge to Pillar Hill SR pumping issue caused by power dip
The following interruptions occurred during the adverse weather from 22 to 27 March.								
Newry/South Down Interruptions								
21451	Mar-13	6	47	47	0	0	0	Ballinliss SR low due to power cuts at Ballintemple WPS
21451a	Mar-13	4	47	47	0	0	0	
21453	Mar-13	5	14	14	0	0	0	Pump tripped at Kilfeaghan WBS
21454	Mar-13	17	24	24	24	24	0	Power off to WPS at Ballyveagh SR
21455	Mar-13	30.5	5	5	5	5	5	Interruption to Slievenaman DMA caused by power cut at WPS

Interrupt No.	Month	Duration (Hours)	Properties Affected					Comments
			> 0 Hrs	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs	
21456	Mar-13	7	25	25	25	0	0	Interruptions to Benraw District Pumped DMA caused by power cut at Benraw WPS
21456a	Mar-13	16.5	25	25	25	25	0	
21457	Mar-13	62	42	42	42	9	5	Power off to Dehomed HL Pumps and Finnis WPS
Ballymena/Ballymoney/Moyle Interruptions								
21733	Mar-13	49.5	4	4	4	4	4	No access to pumps
21734	Mar-13	90.5	1	1	1	1	1	Unable to access pumps. Also, internal problem
21735	Mar-13	28.5	156	156	156	156	156	Power supply failure at pumps. Generator deployed, connected and started
21736	Mar-13	56.5	6	6	6	6	6	Power failure caused by March snow event
21737	Mar-13	105	359	359	359	359	359	Slimero SR - Crosshill WPS power failure - no access to SR to open bypass
21738	Mar-13	26.5	752	752	752	752	752	Lylehill SR - Lylehill NE & SW DMA's - Lylehill WPS
21739	Mar-13	64.5	19	19	19	19	19	Ballyvoy WPS
21740	Mar-13	8.5	91	91	91	0	0	Craigadoo DMA - Inlet control valve failure
21741	Mar-13	74	18	18	18	18	18	Craiganee WPS
21742	Mar-13	6	6	6	0	0	0	Mullaghsandal Upper WPS
21743	Mar-13	66	51	51	51	51	51	Correen WPS
21744	Mar-13	52	32	32	32	32	32	Upper Ballyboley WPS
21745	Mar-13	47.5	8	8	8	8	8	Braepark Road WPS
21746	Mar-13	17	21	21	21	21	0	Layde WPS
21812	Mar-13	112	1	1	1	1	1	Power failure to pumps supplying the Boghill SR which feeds this customer. Boghill SR level struggled to recover and as this customer is on high ground, their interruption duration was longer than the rest of the Umgall DMA.
East Belfast Interruptions								
21802	Mar-13	14.75	11	11	11	11	0	Loss of power at Killynure WBS and inability to connect Genset
21803	Mar-13	12.5	11	11	11	11	0	Loss of power at Killynure WBS and inability to connect Genset
West Belfast/Lisburn Interruptions								
21805	Mar-13	24.75	30	30	30	30	30	Hannahstown Upper SR emptied due to pump failure at Boghill WPS, which emptied McIlwhan's SR
21806	Mar-13	34.5	45	45	45	45	45	Loss of power at Boghill WPS and subsequent difficulties accessing site to commission portable Genset

The table above provides a summary of the 49 unplanned interruptions in 2012/13 caused by ESFs and lasting more than 3 hours. 27 of the 49 incidents occurred during a period of adverse weather around 22 March when strong winds and ice on power lines caused widespread power outages across the province, with repairs hampered by heavy snow. These incidents were the subject of Upward Report 031.

In terms of numbers of properties affected, the most significant incident occurred during the adverse weather and involved a loss of water supply to 752 properties served by Lylehill WPS. In terms of duration, the most significant incident also occurred during the adverse weather and involved a loss of water supply of 105 hours to properties served by Crosshill WPS.

With the impact of the adverse weather removed, only one incident involved more than 150 properties and lasted for more than 12 hours. This incident occurred in July and affected 445 properties in the Tullybrannigan DMA. All but 5 of the properties had their water supply restored within 6 hours. 1 property was without water for more than 12 hours. The incident was the subject of Upward Report 009.

Numbers of incidents in 2012/13 involving electricity supply failures

	> 3 Hours	> 6 Hours	> 12 Hours	> 24 Hours
Incidents (<i>excluding adverse weather</i>)	18	3	1	0
Adverse Weather Incidents	4	3	5	15
All Incidents	22	6	6	15
Percentage Adverse Weather Incidents	18.2%	50.0%	83.3%	100%

Percentage impact of electricity supply failures on annual outturns

Numbers of Properties Affected by ESFs	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs
Incidents (<i>excluding adverse weather</i>)	861	156	1	0
Adverse Weather Incidents	1,851	1,737	1,588	1,492
All Incidents	2,712	1,893	1,589	1,492
Outturn Numbers of Properties Affected by Unplanned Interruptions				
Incidents (<i>excluding adverse weather</i>)	51,588	8,731	1,019	62
All Incidents	53,458	10,487	2,607	1,554
Percentage Impact				
Incidents (<i>excluding adverse weather</i>)	1.7%	1.8%	0.1%	0.0%
Adverse Weather Incidents	3.5%	16.6%	60.9%	96.0%
All Incidents	5.1%	18.1%	61.0%	96.0%

The impact of the electricity supply failures was greatest on the >24hr outturn, accounting for 96% 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 ESFs (<i>excluding adverse weather</i>)	0.019%	0.0001%	0.000%
Percentage of Connected Properties Affected by ESFs (<i>all incidents</i>)	0.231%	0.194%	0.182%
KPI Target	0.938%	0.202%	0.010%
Percentage of Annual Target (<i>excluding adverse weather</i>)	2.033%	0.061%	0.000%
Percentage of Annual Target (<i>all incidents</i>)	24.671%	96.303%	1,865%

The impact of the electricity supply failures was greatest on >6hr KPI target compliance, amounting to 1,865% 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 32 supply interruption incidents during 2012/13 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	18737	01/04/2012	Burst trunk main, ██████████ Belfast	2	200	0	0	0	0	Precautionary
002	18681	04/04/2012	Burst main, ██████████ Mayobridge	13	78	78	78	78	0	3
003	18975	15/04/2012	Inlet valve fault, Ballymageogh SR	5.5	49	49	0	0	0	3
004	18753	20/04/2012	Burst main, ██████████ Ballygawley	13.5	347	347	347	40	0	3
005	18841	26/04/2012	Burst trunk mains, ██████████ Florencecourt	1.5	8	0	0	0	0	3
	18843			10.25	34	34	16	0	0	
006	19086	11/05/2012	10" dia. burst main, ██████████ Killylea, Armagh	9.75	250	250	20	0	0	2
007	19108	07/06/2012	12" dia. trunk main from Altmore SR	8	250	250	12	0	0	3/2
008	19209	25/06/2012	Burst main, ██████████ Portadown	3.5	2142	2142	0	0	0	3
	19253	30/06/2012		4.75	50	50	0	0	0	
009	19352	03/07/2012	Mains failure at Tullybranigan HLSR affecting Tullybrannigan High DMA	15.5	445	445	5	1	0	3
010	19472	31/07/2012	Broken valve spindle, Ballyhemlin Road, Kircubbin	8.5	20	20	20	0	0	3
011	19616	16/08/2012	Ballykine Lodge to Pillar Hill SR pumping issue	31.5	52	52	52	52	52	3
	19619			5	34	34	0	0	0	
012	No OMIS Ref	17/08/2012	12" dia. burst main, Glengormley - Ballywonard Reservoir	3	200	0	0	0	0	3
013	19681	26/08/2012	Burst trunk main, ██████████ Enniskillen	24	77	17	3	0	0	3
014	19682	31/08/2012	Level control fault, Crawfords Hill SR, Enniskillen	9.5	21	21	21	0	0	3
	19683			2.5	108	0	0	0		
015	20022	17/10/2012	Burst main, ██████████ Ballykelly, Limavady	14	50	50	50	50	0	3
016	20073	17/10/2012	Rathlin Island borehole failure	22.25	10	10	10	10	0	3
017	20011	28/10/2012	Breach, Bessbrook area	6.5	12	12	1	0	0	4
	20012			5.75	12	12	0	0	0	

Ref	Interrupt No.	Date of Incident	Description of Incident	Duration	>0 hrs	>3 hrs	>6 hrs	>12 hrs	>24 hrs	Category
018	20100	01/11/2012	Breach in 250mm dia. trunk main from Fofanny WTW	2.75	1983	0	0	0	0	3
019	20195	06/11/2012	Breach in 250mm dia. trunk main from Fofanny WTW	1.5	1984	0	0	0	0	3
020	20654	02/12/2012	Burst main, Rehaghy DMA, Dungannon	10.5	309	309	309	0	0	Precautionary
	4.75			425	425	0	0			
	20652	03/12/2012		6.5	309	309	309	0	0	
021	20517	04/12/2012	Burst main, Kinallen SR, Kinallen, Dromore, Co. Down	6	28	28	0	0	0	3
022	20711	08/01/2013	Burst trunk main, Whiteabbey Upper	4	167	167	0	0	0	3 (Precautionary)
023	20976	08/01/2013	Burst main, ██████████ Kircubbin	14.5	5	5	5	5	0	3 (Precautionary)
	20977			5	1,043	1,043	0	0		
024	20965	21/01/2013	Burst pumping main, ██████████ Dromara	21	14	14	14	14	0	Precautionary
025	21283	15/02/2013	Burst main, ██████████ Glenwherry, Ballymena	14	201	201	201	201	0	3
	21284			10	1,086	1,086	1,086	0	0	
	21285			6	399	399	0	0	0	
026	21400	06/03/2013	Burst main, ██████████ Templepatrick	6.5	313	313	313	0	0	3
027	21345	07/03/2013	Burst main, ██████████ Kinallen	2.75	20	0	0	0	0	3
028	21604	15/03/2013	Burst main, Enagh & Killane DMA's, Limavady	8	99	99	99	0	0	3
029	21705	15/03/2013	Burst main, ██████████ Limavady	6	155	155	0	0	0	3
	21706			7.5	155	155	155	0	0	
030	21596	18/03/2013	Ballykine Lodge to Pillar Hill SR pumping issue caused by power dip	9.5	131	131	131	0	0	3
031	28 No. in Total	22 to 27/03/2013	Heavy snowfalls throughout Northern Ireland	Various	1,870	1,870	1,756	1,588	1,492	3
032	21605	26/03/2013	Burst trunk main, ██████████ Ballyclare	4.75	1,658	1,658	1,658	0	0	3

NI Water assumes a monthly target allowance of one seventeenth of the yearend target from April to October and a monthly target allowance of two seventeenths of the yearend target from November to March. The allowance is doubled from November to March to account for freeze-thaw conditions and an associated rise in the numbers of bursts.

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

KPI	2012/13 Target		Monthly Target Allowance			
			Apr to Oct		Nov to Mar	
	%	Properties	%	Properties	%	Properties
>6hrs	0.938	7,673	0.055	451	0.110	903
>12hrs	0.202	1,650	0.012	97	0.024	194
>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 2012/13, the company firstly compared the monthly actuals with the three KPI target profiles and identified 13 instances where a target was exceeded. These instances are highlighted in bold text in the table below.

		Apr 12	May 12	Aug 12	Oct 12	Dec 12	Feb 13	Mar 13
>6 hour	Actual	590	628	203	587	1,215	2,335	2,854
	Target	451	451	451	451	903	903	903
>12 hour	Actual	171	4	57	124	267	363	1,592
	Target	97	97	97	97	194	194	194
>24 hour	Actual	1	0	52	0	0	3	1,496
	Target	5	5	5	5	9	9	9

The company then reviewed its DG3 Register and identified the 10 incidents responsible for the underperformance. The 10 incidents are summarised below.

Major Incidents

Burst main, ██████████ Mayobridge (Ref: Interrupt No. 18681)

On 4 April, 78 properties in Mayobridge experienced an unplanned interruption of 13 hours due to a burst on a 100mm diameter PVC distribution main. The breach occurred at 23:00 and customers would have been unaware of the full impact of the disruption to supply. The incident was the subject of Upward Report 002.

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

Burst main, ██████████ Ballygawley (Ref: Interrupt No. 18753)

On 20 April, 347 properties served by Tullyvar Pumped DMA, Dungannon experienced an interruption of more than 6 hours due to a failure of the joint between the 9 inch diameter asbestos cement Glenchuil SR gravity outlet main and an MDPE pumping main. The joint was surrounded by dense concrete and as such, there was a delay in carrying out the repair. 40 of the 347 properties (*those on higher ground*) went on to experience an interruption of 13.5 hours. Prior to the repair, the area was rezoned to minimise the disruption to supply. The incident was the subject of Upward Report 004.

The impact of this incident in terms of percentages of connected properties affected was 0.042% >6hrs and 0.005% >12hrs.

Burst main, Killymeal Road Booster DMA (Ref: Interrupt No. 18876)

On 2 May, 516 properties served by Killymeal Road Booster DMA, Dungannon experienced an unplanned interruption of more than 6 hours due to a burst on a pumping main. The excavation was congested and as such, the repair was delayed. 4 of the 516 properties went on to experience an unplanned interruption of 12.5 hours.

The impact of this incident in terms of percentages of connected properties affected was 0.063% >6hrs and 0.0005% >12hrs.

Loss of supply, Pillar Hill SR, Ballynahinch (Interrupts 19616 & 19619)

On 16 August, the pumps tripped at Ballykine Lodge Pumping Station causing Pillar Hill SR to empty. Initially, 86 Ballynahinch properties on high ground in one of three DMAs supplied by the reservoir experienced an unplanned interruption of 5 hours. However, 52 of these properties went on to experience a further unplanned interruption because of a burst on a 3 inch distribution main, a faulty ball valve and airlocks created in the system as the reservoir level recovered. It was 31.5 hours before their supplies were fully restored. The incident was the subject of Upward Report 011.

The impact of this incident in terms of percentages of connected properties affected was 0.006% >6hrs, 0.006% >12hrs and 0.006% >24hrs.

Burst main, [REDACTED] Downpatrick (Interrupts 20027 & 20028)

On 25 October, 136 properties in Downpatrick experienced an unplanned interruption of 9 hours as a result of a burst on a 9 inch asbestos cement distribution main. A further 62 properties experienced an unplanned interruption of 16.25 hours as a result of the same incident.

The impact of this incident in terms of percentages of connected properties affected was 0.024% >6hrs and 0.008% >12hrs.

Burst main, [REDACTED], Lisburn (Ref: Interrupts. 20395 & 20396)

On 1 December, 110 properties in Lisburn experienced an unplanned interruption of 17.5 hours as a result of a burst on a distribution main. The breach occurred at 00:00 and customers would have been unaware of the full impact of the disruption to supply. A further 500 properties in the [REDACTED] experienced an unplanned interruption of 1 hour when the main valve was shut to complete repairs.

The impact of this incident in terms of percentages of connected properties affected was 0.013% >6hrs and 0.013% >12hrs.

Burst main, [REDACTED], Dungannon (Interrupts 20652, 20653 & 20654)

On 2 December, 309 properties in Dungannon experienced an unplanned interruption of 10.5 hours as a result of a burst on a distribution main. The same properties experienced a further 6.5 hour interruption on the following day. The burst also affected Reahaghey Service Reservoir and 425 properties served by Reahaghey DMA experienced an interruption of 4.75 hours. The incident was the subject of Upward Report 020.

The impact of this incident in terms of percentages of connected properties affected was 0.076% >6hrs.

Inisclan South Service Reservoir (Interrupts 21067, 21068, 21069 & 21070)

On 6 February, 658 properties in ██████████ Omagh experienced an unplanned interruption when Inisclan South Service Reservoir went to 'empty'. Supplies were restored to 546 properties within 6 hours but 111 properties experienced an unplanned interruption of 12.75 hours.

The impact of this incident in terms of percentages of connected properties affected was 0.014% >6hrs and 0.014% >12hrs.

Burst main, ██████████ Glenwherry (Interrupts. 21283, 21284 & 21285)

On 15 February, a burst occurred on the 12 inch inlet to Greenhill Gauge Tank affecting supplies to Craigstown, Killylane and Craigadoo DMAs in Ballymena. As the defective length of pipe was located under 400 mm of asphalt, the excavation was difficult and the repair took longer than expected. As a result of the incident, 1,086 properties in Craigstown DMA experienced an unplanned interruption of 10 hours. 399 properties in Craigstown DMA also experienced a further unplanned interruption of 6 hours. And 201 properties in Craigadoo DMA experienced an interruption of 14 hours. The incident was the subject of Upward Report 025 and was clearly the most significant incident of the year (*adverse weather excluded*).

The impact of this incident in terms of percentages of connected properties affected was 0.157% >6hrs and 0.025% >12hrs.

Adverse Weather – 22 to 27 March 2013 (Upward Report 31)

In the early hours of 22 March, an area of rain, pushed west in the strong to gale-force easterly winds, quickly turned to snow, accumulating at all levels and giving deep drifts across the hills of Counties Down and Antrim. There was widespread disruption as thousands of homes and businesses were left without electricity and roads became impassable.

A Category 3 incident, managed by a Category 1 incident team, was declared as power was lost to some of NI Water's major works as well as numerous service reservoirs and pumping stations throughout the Province. Back-up generators were activated at larger sites and mobile generators were deployed to smaller sites. The remoteness of some locations and difficult access routes prevented the initiation of temporary power supplies at every site. Teams on the ground, worked with NIE and other agencies in extremely challenging conditions to distribute bottled water and restore power to sites as quickly as possible. Several properties did not have their water supplies restored until 27 March.

Distribution areas affected by the adverse weather were Newry/South Down, Ballymena/Ballymoney/Moyle, East Belfast and West Belfast/Lisburn.

A timeline for the incident shows that at its peak on 23 March between 17:30 and 19:00, 1,513 properties were without water.

Maximum number of properties affected at any one time

22 March	23 March	24 March	25 March	26 March	27 March
621	1,513	1,511	489	361	2

During the incident, the details of 28 individual unplanned interruptions were recorded in the DG3 Register. All but one of these interruptions were caused by electricity supply failures. The only exception involved a small number of properties on the [REDACTED] Carryduff, where air locking occurred as a result of air valves being covered with snow. Some problems were intermittent, resulting in more than one interruption to the same properties.

During the incident, the most significant issue for NI Water involved a power supply failure at Crosshill Water Pumping Station which feeds Slimero Service Reservoir. Heavy snow prevented access to the reservoir to open a bypass valve. As a result of this event, 359 properties served by Snowy Glen and Loughmourne DMAs were without water for 105 hours. (*see Interrupt No. 21737*)

The second most significant issue involved a power supply failure at Lylehill Water Pumping Station which feeds Lylehill Service Reservoir. As a result of this event, 752 properties served by Lylehill NE and SW DMAs were without water for 26.5 hours. (*see Interrupt No. 21738*)

The total numbers of properties affected for more than 3 hours, more than 6 hours, more than 12 hours and more than 24 hours were 1,870, 1,756, 1,588 and 1,492 respectively.

Interruption durations varied with 4 lasting between 3.25 and 6 hours, 3 lasting between 6.25 and 12 hours, 5 lasting between 12.25 and 24 hours and 16 lasting more than 24 hours.

The impact of the adverse weather in terms of percentages of connected properties affected was 0.215% >6hrs, 0.194% >12hrs and 0.182% > 24hrs.

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

The AIR09 Reporter recommended the use of consistent accuracy bands.

In 2012/13, 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 2012/13, 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 2,974 interruption records to the Operations Management Information System (OMIS). All records were checked for accuracy and completeness by the Customer Field Managers and 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 768 interruption records. All 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 3,742 interruption records generated by NI Water (1,591 reportable in AIR13 by duration) 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 323 unplanned, unwarned and third party interruptions lasting 5 hours or more were compared with the records of 'no water' complaints received in 2012/13 and the interruption records were revised accordingly to ensure consistency with the regulatory guidance. This represents 41% of all reportable interruptions within these two interruption categories.

Upward Report Comparisons

During the year, 92 upward reports were circulated within NI Water relating to water supply/distribution issues of which, 32 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 32 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 continues to make progress towards improving its confidence grades by reviewing its current reporting practices and identifying areas which could benefit from a degree of automation through the use of trial exercises. The Company also continues to expand the scope of its audit checks and is working towards formalising requirements for a replacement database.

In addition to the data quality improvements outlined above, NI Water has been looking at ways to improve customer satisfaction. The introduction of Service Failure Analysis (SFA) reporting on interruptions lasting longer than 12 hours is leading to a greater understanding of the root cause of interruptions and how their impact may be reduced.

Reporter's Recommendations on AIR12 – Progress Update

Following the AIR12 audit, the Reporter made four 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.

- *A review of how planned work is scheduled may help improve customer satisfaction*

A revised approach to customer warning notifications was agreed and communicated to both Water Main Rehabilitation Framework contractors in July 2012. A comparison of durations between customer warning times and actual shutdown times for the year 2011/12 and the period August 2012 to March 2013 confirms there has been a 49% improvement in the accuracy of warning notifications.

Results are as follows:

Year 2011/12 – Average duration between customer warning times and actual shut down times = 4.02 hours

Aug 12 to Mar 13 – Average duration between customer warning times and actual shut down times = 2.07 hours

- *Undertake additional sample checks to ensure transcription errors are kept to a minimum*

Commencing in June 2012, Customer Systems has carried out monthly sample checks involving four randomly selected Engineering Procurement interruption records to ensure that the details reflect the supporting information and that transcription errors have not occurred. Supporting information includes Interruption Record Pro Forma and warning cards/GIS address lists (*where applicable*). In total, 40 interruption records out of 558 records relating to interruptions lasting more than 3 hours have been checked since the process began, amounting to a 7% sample check. Audit check findings have been documented.

- *Cross referencing to Rapid on unplanned interruption post incident analysis could improve the efficiency of the reporting process*

A six-month trial exercise has taken place involving a weekly review of 'no water' complaints by the Ards/Bangor and Magherafelt area Field Managers ahead of confirming their interruption details on OMIS.

Following an assessment of the results of the trial exercise, the consensus is that given the time and effort involved, it would be impractical to adopt this practice across the organisation without some degree of automation. The efficiency of the reporting process has not improved as the time that would previously have been spent on comparisons by the data analyst is now being spent by the Field Managers. The conclusion is that the structure and reporting process in NI Water does not lend itself to this recommendation. The Company will continue to look for alternative verification practices that better fit the organisation.

- *Recommend that consideration is given to the facility to record more accurate start and end times in the design of any replacement of OMIS*

The Info Flow 2 Project has recently been launched with the aim of developing an information flow system (building on the MIP Sharepoint Information Flow system) which will be used everyday for the reporting and recording of information including interruptions to supply. It is intended that the DG3 element of OMIS will be replaced by the new Information flow system. It is also planned that the timely entry of burst

details into the new system could result in automatic customer information updates to the Company website and the HVCA system, thus eliminating manual effort.

A series of Management Information requirement workshops are planned for early 2013/14 to develop the DG3 part of the solution. The purpose of the workshops is to identify the detailed information requirements needed to support DG3 reporting, upward reporting and incident management, by drawing on the knowledge of experienced staff.

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 2012. Information was extracted from monthly bulletins published on the Department of Enterprise, Trade and Investment (*DETINI*) website.

MONTH	HOTEL BED-SPACES SOLD	GUESTHOUSE & B&B BED-SPACES SOLD	TOTAL BED-SPACES SOLD	PERCENTAGE
Jan-12	161,700	20,600	182,300	5.33%
Feb-12	169,900	20,900	190,800	5.58%
Mar-12	203,200	36,700	239,900	7.01%
Apr-12	241,757*	52,243*	294,000	8.59%
May-12	247,513*	53,487*	301,000	8.80%
Jun-12	264,000	67,000	331,000	9.67%
Jul-12	313,000	72,000	385,000	11.25%
Aug-12	319,000	92,000	411,000	12.01%
Sep-12	260,000	66,000	326,000	9.53%
Oct-12	240,100	60,400	300,500	8.78%
Nov-12	203,200	38,700	241,900	7.07%
Dec-12	180,200	38,700	218,900	6.40%
Total	2,803,570	618,730	3,422,300	100.00%

*Estimate based on total bed-spaces sold in month, apportioned according to the March & June average splits for hotels and guesthouses/B&Bs (*hotels: 82.2% of total; guesthouses & B&Bs: 17.8% of total*)

Assumption: The percentage bed-spaces sold during the winter was taken as the summation of the percentages for January, February, March, April, November and December, as these were the six months of the year with the lowest percentages.

$$5.33\% + 5.58\% + 7.01\% + 8.59\% + 7.07\% + 6.40\% = 39.97\%$$

Changes in Methodology

This year, NI Water has changed its methodology for calculating the number of overseas + RoI visitor nights. This change has been prompted by:

1. Delays in the publication of the HOTRA Survey, the source of RoI visitor nights information, as the 2011 survey results were only published on 11 October 2012.
2. Knowledge that there have been revisions to the overseas visitor nights information for 2010 and 2011, originally published in the 'Results from the

Northern Ireland Passenger Survey' (NIPS), and that there may be a similar revision to the 2012 information.

3. Recognition that overseas and RoI visitor trends may differ.

In order to overcome these issues, a new methodology has been developed, based on the historical relationship between bed-space data, RoI visitor nights data and overseas visitor nights data.

The following table provides a summary of the bed-space, RoI visitor nights and overseas visitor nights data for 2010, 2011 and 2012.

	2010	2011	2012
Hotel Bed-Spaces Sold	2,555,800 ¹	2,592,200 ¹	2,803,570 ¹
Guest House & B&B Bed-Spaces Sold	552,300 ¹	544,200 ¹	618,730 ¹
Overseas Visitor Nights	8,322,000 ²	8,459,000 ²	N/A
RoI Visitor Nights	1,255,000 ³	1,214,000 ³	N/A
Total Non-Resident Visitor Nights	9,577,000*	9,673,000*	Unknown

Note 1. Data Source – Statistics on Accommodation monthly bulletins

Note 2. Data Source – Revised Estimated Visitors to NI from GB and Overseas (2010; 2011)

Note 3. Data Source – Household Travel Survey (2010; 2011)

*Recalculated using Revised Estimated Visitors to NI from GB and Overseas (2010; 2011)

The relationship between the data sets was established by solving a series of three equations, the variables 'a' and 'b' of which were found to be 3.200 and 2.530 respectively.

$$2,555,800a + 552,300b = 9,577,000$$

$$2,592,200a + 544,200b = 9,673,000$$

$$2,803,570a + 618,730b = \text{Unknown}$$

Based on the above equations, the estimated number of non-resident visitor nights in 2012 was 10,538,042.

By calculation, the estimated number of non-resident winter visitor nights
 $= (10,538,042 / 100) \times 39.97 = 4,211,768$

By calculation, the estimated average number of non-resident winter visitors per night
 $= 4,211,768 / (31 + 29 + 31 + 30 + 30 + 31) = 23,142$

According to AIR13: Table 7: Line 17, the baseline resident population is $1,819.47 \times 10^3$

By calculation, the Population (winter) = $1,819,470 + 23,142 = \mathbf{1,842,612}$.

NIW accepts that this methodology may not be ideal. However, methodology options have been severely restricted by a decline in the availability of current information relating to overseas and RoI/NI tourism. NI Water will use this new methodology going forward and until such time as the regularity and reliability of published data improves.

As there have been revisions to the overseas visitor nights information for 2010 and 2011, originally published in the *'Results from the Northern Ireland Passenger Survey' (NIPS)*, NI Water has recalculated outturns for AIR11 and AIR12 to serve as comparators.

	AIR11	AIR12
Total Non-Resident Visitor Nights	9,577,000*	9,673,000*
% Bed-Spaces Sold in Winter	39.34% ¹	41.32% ¹
Non Resident Winter Visitor Nights	3,767,818*	3,997,314*
Winter Nights (Jan to Apr, Nov & Dec)	181	181
Non Resident Winter Visitors Per Night	20,817*	22,085*
Table 7 Line 17 – Resident Population	1,798,480	1,808,820
Population (winter)	1,819,297*	1,830,905*

*Recalculated using Revised Estimated Visitors to NI from GB and Overseas (2010; 2011)

Note 1. Data Source – Calculation based on information derived from Statistics on Accommodation monthly bulletins

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

AIR11	AIR12	AIR13
1,819.30 x 10 ³ *	1,830.91 x 10 ³ *	1,842.61 x 10³

*Recalculated using Revised Estimated Visitors to NI from GB and Overseas (2010; 2011)

The Winter Population figure has increased from 1,830.91 x 10³ in AIR12 to 1,842.61 x 10³ in AIR13, an increase of 11.71 x 10³ (0.6%). This slight increase can be attributed to changes in the component figures that make up this figure. The baseline resident population has increased from 1,808.82 x 10³ to 1,819.47 x 10³, an increase of 10,650. And the estimated average number of non-resident winter visitors per night has increased from 22,085 to 23,142, an increase of 1,057.

According to NI Tourist Board's Tourism Barometer, the ni2012 Tourism Drive and related events as well as the opening of Titanic Belfast, the new visitor's centre at the Giant's Causeway and the Irish Open seem to have had a positive impact on the hotel and guesthouse sectors as both reported overall bed-night volumes to be up on last year.

Confidence Grade

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

1. The publication *'Revised Estimated Visitors to NI from GB and Overseas'* provides only an estimate of the annual number of overseas non-resident visitor nights based on surveys conducted by DETINI.
2. The publication *'Household Travel Survey'* provides only an estimate of the annual number of RoI non-resident visitor nights, based on a random stratified sample. Each month, over 4,600 households (or approximately 0.3% of all private households) are randomly selected from the Electoral Register, where the selection is stratified by District Electoral Division.
3. The publication *'Statistics on Accommodation'* provides only an estimate of the numbers of bed-spaces sold, based on the extrapolation of data for a representative sample group of establishments.

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 34,760 properties (+1.89%). *(See calculation below)*

$$10,538,042 / (31 + 29 + 31 + 30 + 30 + 31) = 57,901 \text{ non-resident visitors}$$

$$1,819,470 + 57,901 = 1,877,371 \text{ resident + non-resident visitors}$$

$$1,877,371 - 1,842,612 = 34,760$$

$$(34,760 / 1,842,612) \times 100 = 1.89\%$$

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		5		6		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG	2012-13	CG	
A DG5 ANNUAL FLOODING SUMMARY															
1	Number of domestic properties connected to sewerage system	000	1	676.3	B2	598.8	B2	603.4	C3	612.1	C2	618.5	A2	623.3	A2
(i) OVERLOADED SEWERS															
2	Properties flooded in the year (overloaded sewers)	nr	0	195	D6	3	B4	6	B4	4	B3	10	B3	189	B3
3	Flooding incidents in the year (overloaded sewers)	nr	0	212	D6	3	B4	6	B4	10	B3	15	B3	189	B3
4	Flooding incidents (overloaded sewers attributed to severe weather)	nr	0	126	D6	0	B4	0	B4	4	B3	1	B3	181	B3
4a	Properties flooded in the year attributed to severe weather	nr	0	N/C		N/C		N/C		10	B3	1	B3	181	B3
5	Props. where flooding limited to uninhabited cellars only (o/loaded sewers)	nr	0	0	D6	0	DX	0	D6	0	B3	0	B3	0	B3
(ii) OTHER CAUSES															
6	Properties flooded in the year (other causes)	nr	0	366	D6	23	B4	5	B4	28	B3	23	B3	41	B3
7	Properties which have flooded more than once in the last ten years (other causes)	nr	0	108	D6	3	CX	1	CX	7	B3	6	B3	15	B3
8	Flooding incidents (other causes - equipment failures)	nr	0	19	D6	4	B4	0	B4	4	B3	4	B3	15	B3
9	Flooding incidents (other causes - blockages)	nr	0	324	D6	16	B4	3	B4	14	B3	17	B3	22	B3
10	Flooding incidents (other causes - collapses)	nr	0	34	D6	3	B4	2	B4	10	B3	2	B3	4	B3
11	Props. where flooding limited to uninhabited cellars only (other causes)	nr	0	0	D6	0	DX	0	D6	6	B3	0	B3	0	B3
B DG5 PROPERTIES ON THE AT RISK REGISTER															
(i) SUMMARY															
12	2 in 10 register at end of year	nr	0	80	DX	80	DX	1	DX	6	B4	17	B3	30	B3
13	1 in 10 register at end of year	nr	0	0	DX	745	D6	704	D6	3	B4	10	B3	10	B3
14	Total 1 in 10 and 2 in 10 properties on the register at end of year	nr	0	80	DX	825	DX	705	DX	9	B4	27	B3	40	B3
15	1 in 20 register at end of year	nr	0	0		0	DX	0	DX	211	B4	189	B4	153	B3
15a	Potential risk of property flooding identified requiring further investigation to assess at risk category.	nr	0					6	B2	8	B2	0	B2	0	B2
16	Props. on the register which have not flooded in the past 10 yrs (excl. severe weather)	nr	0	N/C		N/C		N/C		0	BX	1	B2	32	B3
17	Properties which have not flooded internally but suffer restricted toilet use (RTU)	nr	0			N/C		350	C4	0	B3	0	B2	0	B2
(iii) ANNUAL CHANGES TO 2 IN 10 & 1 IN 10 REGISTERS															
22	Removed by company action	nr	0	N/C		N/C		185	A1	0	B4	0	B3	1	B3
23	Removed because of better information	nr	0	N/C		N/C		N/C		705	B4	0	B3	2	B3
24	Added because of better information (actually flooded)	nr	0							9	B4	18	B3	16	B3
25	Added because of better information (modelled)	nr	0							0	A1	0	A1	0	A1
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
(v) ANNUAL CHANGES TO THE 1 IN 20 REGISTER															
30	Removed by company action (1 in 20)	nr	0	N/C		N/C		N/C		4	B4	14	B3	65	B3
31	Removed because of better information (1 in 20)	nr	0	N/C		N/C		N/C		0	B4	11	B3	24	B3
32	Added because of better information (actually flooded - 1 in 20)	nr	0							215	B4	3	B3	53	B3
33	Added because of better information (modelled - 1 in 20)	nr	0							0	A1	0	A1	0	A1
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

Table 3 - Key Outputs – Sewerage Service – Internal Flooding

Objective/Aim

To maintain a verifiable DG5 register which provides an auditable method for identifying properties which are affected by flooding or are at risk of flooding and identifying the causes of 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 AIR13 has remained the same.

The difference between the AIR12 and the AIR13 figure is 4779. This figure is broadly in line with our New Connections for the 2012/13 reporting year with the difference explained by the following:-

Added as a result of a customer contact. E.g. septic tank empty request, no water complaint etc. Within this category there are 2 scenarios:

- The adding of properties NI Water allegedly didn't know about. (This is the gap the Rapid-POINTER Phase 3 project aims to close).
- The adding of duplicates as the customers address couldn't be found on Rapid. For example, Rapid may hold the site number but when customer contacts NI Water they quote the verified postal address which is different, therefore creating a duplicate. Another example - The street name may have changed from the time of New Connection to time of customer contact – street names can change in the early stages of site developments.

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 been put in place to address this issue. 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 Integrity 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.

Internal Flooding Process

The DG5 register process has been live since April 2011. The process ensures that a robust investigation is carried out for all internal flooding reports. Although the Internal Flooding process is now in place, the process itself continues to be refined. 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.

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.

Properties added and then removed in the reporting year

51 properties in were added to the registers in the reporting year due to better information. These properties were subsequently removed due to the completion of a capital works scheme.

Mitigation

The company provides mitigating measures to lessen the risk of flooding to properties. This is done on a case by case assessment governed by the operational field manager and funded through the Operational capital budget.

33 properties in total remain on the register which are protected by mitigation measures.

Early Start Programme

Ofwat Definition- Early start programme: A scheme that lets appointed water companies start certain work programmes earlier than the price review would usually allow. The aim is to mitigate a significant dip in companies' activity because of uncertainty in the outcome of the price review process-

NI Water had no early start programme for PC10 therefore there are no outputs to report on.

Cost benefit Analysis

The company does not at present carry out cost benefit analysis on DG5 projects. However to allow prioritisation of schemes the programme set out below is proposed.

- Review of existing CWP to ensure proposed DG5 related programmes of work are captured.
- Development of a prioritisation methodology relative to frequency, impact and cost.
- Receipt and analysis of feasibility studies to inform the prioritisation matrix, including cost details.
- Review to ensure alignment with Price Control Targets and Capital Allocations.

Progress against profile

In total for PC10 the monitoring plan states that NI Water should remove 143 properties in total from all registers (100 in year 1, 23 in year 2 and 20 in year 3) by company action.

84 properties in total were removed by company action from all registers in the PC10 period (4 in year 1, 14 in year 2 and 66 in year 3).

For the coming PC 13 period the company intends to remove 67 properties in total from all registers by company action, 23 in the first year and 44 in the second year.

Predicted/Actual additions to the register

The final PC10 business plan submission predicted that;

“NI Water assumes that 12 new properties experiencing internal flooding will occur each year...”

In the report year 2012 – 2013 sixty nine properties which have suffered internal flooding due to hydraulic incapacity were added to the register. However only 8 were actually internally flooded in the year due to hydraulic incapacity in the sewerage system. The remaining properties were flooded in previous years but as evidence only emerged (through feasibility and other studies) the properties were added to the registers in this reporting year. A small number of properties moved between the registers as a result of better information or repeat flooding incidents.

Unknown cause flooding incidents

There were no ‘unknown cause’ properties affected by flooding added to the internal flooding register.

Assumptions

For the purpose of AIR13, NIW has assumed that a single incident includes recorded complaints from the same property on the same day or within three days. This time span 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.

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 2012 to March 2013 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, are 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 13 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 2012/13.
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 have made enquiries as to whom they should contact within NIHE if required. NIW call centre staff has been more rigorous in not accepting NIHE customer complaints. The figures show for themselves, of the 660 reported incidents of internal flooding only 3 related to a NIHE property, 0.198%. Due to this very low % NIW have not made any formal contact with NIHE but will continue to monitor this situation on a monthly basis. This year's higher total figure of reported incidents is due to two exceptional events in June 12 and January 13 when 335 and 75 of the 660 were reported. As presented in the tables below (A - actual figures B – using average figures for Jun and Jan) if these events hadn't occurred NIW would have continued to reduce the number of reported incidents.

A		B	
Apr-12	21	Apr-12	21
May-12	13	May-12	13
Jun-12	335	Jun-12	25
Jul-12	21	Jul-12	21
Aug-12	30	Aug-12	30
Sep-12	20	Sep-12	20
Oct-12	37	Oct-12	37
Nov-12	28	Nov-12	28
Dec-12	25	Dec-12	25
Jan-13	75	Jan-13	28
Feb-13	25	Feb-13	25
Mar-13	30	Mar-13	30
Total	660	Total	303

The FIR has been further amended as per the Reporters recommendations, (see appendix A), to ensure that the quality of information provided by the contractor is of a much more detailed quality and that there is a photograph scanned onto the FIR. At present NIW are still awaiting the Contractor's full implementation of a new handheld PDA which will require all fields to be completed before the operator can close any job. The PDA's are still being trialled as the contractor has met with difficulties during the trial. MUL Contracts Manager has advised that this device should be fully operational by the end of May 2013. 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.

New Flood Incident Report forms (Mar 2013) – See Appendix A.

Previously the FIR stated “Comments on cause of flooding :(Select only one category below);” the contractor failed to recognise the need to tick appropriate boxes if there was no flooding. The FIR now states “Comments on cause of reported incident” and the contractor has been advised that this needs completed in all cases. Appendix B shows an example of a completed new FIR.

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 is B3 and lines 15a and 17 is B2.

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

Reporting Process Lines 12 - 34

The DG5 Oracle database was interrogated to produce statistics for lines 12 to 16.

Line 22. This line reports the number of properties removed from the 1 in 10 and 2 in 10 registers.

The DG5 Oracle database was interrogated to produce statistics for lines 23 to 25. The minutes of the DG5 Panel meetings were examined to verify the changes.

NI Water did not remove any properties from the 1 in 10 register by company action during this reporting period hence average capex cost of permanent solutions to 1 in 10 and 2 in 10 DG5 problems for line 26 is simply the cost to remove 1 property from the 2 in 10 register. The outturn cost was £168.8K.

The DG5 Oracle database was interrogated to produce statistics for lines 30 to 33. The minutes of the DG5 Panel meetings were examined to verify movements.

The total cost of removing 65 properties from the 1 in 20 register due to company action was calculated. This total was divided by the number of properties removed from the 1 in 20 registers due to company action to give the average capex cost of permanent solutions to 1 in 20 DG5 problems for line 34. The outturn cost was £45.1k per property. This average was greatly reduced due to one capital scheme removing the risk of flooding at 52 properties.

Confidence Grading for Table 3 lines 12 – 34

Flooding incidents reported during the year have been subjected to a rigorous investigative process and must satisfy the DG5 panel of experts before being added to the Register. Therefore grading for lines 12 to 14 have been upgraded to B2.

Lines 15 & 16. NI Water continues to carry out investigations of ‘historical’ records in the 1 in 20 register. As this investigation is not yet complete confidence grading is

B3. It is expected that the investigation and proper categorisation of the records in the 1 in 20 register will be completed in the current reporting period allowing an improved confidence grading for AIR 14.

Line 22 Properties removed from the 1 in 10 and 2 in 10 registers. This line is graded B3 as it is the result of a report from the DG5 Oracle database and is cross checked with the DG5 Panel meeting records.

Lines 23, 24, 31 and 32 are graded B3 as properties that are added to and removed from the register now have to pass through a rigorous verification process.

Lines 25 and 33 are graded A1 as properties that have not flooded, are not added to the register solely from hydraulic modelling. NI Water is currently commissioning two dimensional modelling of out of sewer flooding which will identify exceedences of doorstep levels. This evidence will be used to add properties to the register as result of modelling.

Lines 26, 30 and 34 are the result of sound reports from NI Water's DG5 Oracle database and CPMR Tool, hence these lines are graded B3.

Changes from last year

NI Water has started work to properly categorise the properties defaulted to the 1 in 20 register. 117 of these properties are still under investigation.

26 Properties in total were removed from the registers in the year due to 'better information'. 66 properties were removed from the registers due to company action. 69 properties were added to the internal flooding registers.

APPENDIX A – New Flooding Internal Script



Northern Ireland Water – Flooding Incident Report

Work Order Ref No: _____ Name: _____

Location: _____

Date: _____ Arrival time: _____

- 1) Internal Flooding:

Main Sewer	<input type="checkbox"/>	Lateral Sewer	<input type="checkbox"/>
Adjacent properties flooded	<input type="checkbox"/>	Attached garage flooded	<input type="checkbox"/>
Basements/Cellar flooded	<input type="checkbox"/>	Restricted Toilet use	<input type="checkbox"/>

- 2) External Flooding:

Main Sewer	<input type="checkbox"/>	Lateral Sewer	<input type="checkbox"/>
Public road/footpath	<input type="checkbox"/>	Public area	<input type="checkbox"/>
Agricultural land	<input type="checkbox"/>	Curtilage	<input type="checkbox"/>

- 3) **Comments on cause of reported incident:** (Select only one category below)

Blockage	<input type="checkbox"/>	Collapsed sewer	<input type="checkbox"/>
Defective road gulley	<input type="checkbox"/>	Defective private drain	<input type="checkbox"/>
M&E equipment failure	<input type="checkbox"/>	Other:	

- 4) Clean-up operations:

Not Required	<input type="checkbox"/>	Further Action Required	<input type="checkbox"/>	Completed	<input type="checkbox"/>
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- 5) Previous History:

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not Aware	<input type="checkbox"/>
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- 6) Weather Conditions:

Dry	<input type="checkbox"/>	OR	Wet	<input type="checkbox"/>	Heavy	<input type="checkbox"/>	Medium	<input type="checkbox"/>	Light	<input type="checkbox"/>
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Comments: Especially for Flooded jobs or Follow on jobs

PHOTO FOR FLOODED JOBS:

APPENDIX B – Incident Report Form Contractor



Northern Ireland Water – Flooding Incident Report

Work Order Ref No: 03162775 Name: Down Drains

Location: [REDACTED]

Date: 23/03/2013 Arrival time: 14:00

- 1) Internal Flooding:

Main Sewer	<input checked="" type="checkbox"/>	Lateral Sewer	<input type="checkbox"/>
Adjacent properties flooded	<input type="checkbox"/>	Attached garages flooded	<input type="checkbox"/>
Basements/Cellar flooded	<input checked="" type="checkbox"/>	Restricted Toilet use	<input type="checkbox"/>

- 2) External Flooding:

Main Sewer	<input checked="" type="checkbox"/>	Lateral Sewer	<input type="checkbox"/>
Public road/footpath	<input type="checkbox"/>	Public area	<input type="checkbox"/>
Agricultural land	<input type="checkbox"/>	Curtilage	<input checked="" type="checkbox"/>

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

Blockage	<input checked="" type="checkbox"/>	Collapsed sewer	<input type="checkbox"/>
Defective road gully	<input type="checkbox"/>	Defective private drain	<input type="checkbox"/>
M&E equipment failure	<input type="checkbox"/>	Other:	

- 4) Clean up operations:

Not Required	<input type="checkbox"/>	Further Action Required	<input type="checkbox"/>	Completed	<input checked="" type="checkbox"/>
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- 5) Previous History:

Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	Not Aware	<input type="checkbox"/>
-----	--------------------------	----	-------------------------------------	-----------	--------------------------

- 6) Weather Conditions:

Dry	<input type="checkbox"/>	OR	Wet	<input checked="" type="checkbox"/>	Heavy	<input type="checkbox"/>	Medium	<input checked="" type="checkbox"/>
Light	<input type="checkbox"/>							

Comments: Especially for Flooded jobs or Follow on jobs

PHOTO FOR FLOODED JOBS:



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

Introduction

In 12/13 a formal external flooding 'At Risk Register' has been established for the first time. A written methodology has been produced and the analysis of external incidents has taken place throughout the year.

Unfortunately, the in-house resource devoted to this processing and analysis is extremely limited. As a consequence, the process is heavily dependent upon the accuracy of the information provided by the maintenance Contractor. There are a lot of inconsistencies and missing entries within the contractor information which suggests that a low level of confidence may be attached to its accuracy; in particular, it is suspected that many incidents which the contractor has classified as 'other causes' may in fact be due to hydraulic capacity issues.

It is acknowledged that, given the reliance of the process upon the accuracy of the contractor information, a greater effort is required on the part of NIW to increase the level of quality control.

Annual Flooding Summary (Section A)

- The total number of 'overloaded sewers' incidents has reduced from 339 in 11/12 to 225.
- The total number of 'other causes' incidents has increased from 2715 in 11/12 to 3576.

Because of the issues identified in this commentary a low confidence grade continues to be attached.

Line 8: The areas which have been classified as affected by 'other causes' incidents in previous Annual Returns have no available definition of location - therefore Line 8 cannot be completed.

At Risk Register (Section B)

Those incidents in 12/13 which have been deemed to be caused by 'hydraulic overloading' – and which were not due to severe weather – have been transferred to the At Risk Register. No 'Annual Return incidents' from previous years have been incorporated.

Of the 216 areas now on the Register, 196 of these have been added by the processing of 12/13 incidents; 17 have been added from other sources – primarily information supplied by operational staff.

The written methodology requires that Asset Performance section should carry out an 'investigation' of each incident which has been classified as potentially 'hydraulic'. Due to a lack of resources a significant number of such incidents have not been subject to investigation; these incidents remain classified as 'hydraulic' and have therefore been transferred to the Register. It is likely that many of these incidents should properly be 'other causes'; it is anticipated that over time these may be 'weeded out' from the Register.

In the absence of other information, all additions to the At Risk Register have been 'defaulted' to the 1:10 category. Owing to the fact that the Register is at an embryonic stage, a low confidence grade has been attached (D6).

NORTHERN IRELAND WATER - ANNUAL INFORMATION RETURN

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

DESCRIPTION	UNITS	DP	1		2		3		4		5		6		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG	2012-13	CG	
A DG6 RESPONSE TO BILLING CONTACTS - GENERAL															
1	Total billing contacts	nr	0	53,137	B2	81,370	B3	99,126	B3	104,897	B3	92,832	B2	77,051	B2
2	Number dealt with within 5 working days	nr	0	50,464	B2	80,262	B3	97,271	B3	103,710	B3	92,808	B2	77,118	B2
3	Number dealt with in more than 10 working days	nr	0	1,497	B2	12	B3	59	B3	86	B3	15	B2	26	B2
4	DG6 Percentage dealt with within 5 working days	%	2	95.0	B2	98.6	B3	98.1	B3	98.9	B3	99.97	B2	100.09	B2
5	Percentage dealt with in more than 10 working days	%	2	2.8	B2	0.0	B3	0.1	B3	0.1	B3	0.02	B2	0.03	B2
B CONNECTED PROPERTIES															
6	Number of properties connected for water supply only	nr	0	135,779	B3	141,751	A2	144,655	A2	147,207	A2	149,579	A2	152,771	A2
7	Number of properties connected for water and sewerage services	nr	0	664,282	B3	662,629	A2	654,085	A2	659,237	A2	660,788	A2	665,189	A2
8	Number of properties connected for sewerage services only	nr	0	197	B3	38	A2	35	A2	27	A2	25	A2	25	A2

Table 4 – Customer Service 1 (Total)**DG6 – Response to Billing Contacts**

This was the sixth year of non-domestic billing by Northern Ireland Water (NIW). Following decision of the Executive, domestic charges continued to be deferred for 2012/13 charging year.

No changes, other than tariff changes were made to billing from April 2012.

Chart 1 below shows the monthly profile of DG6 contacts received during 2012/13.

Chart 1 Total volume of monthly DG6 contacts

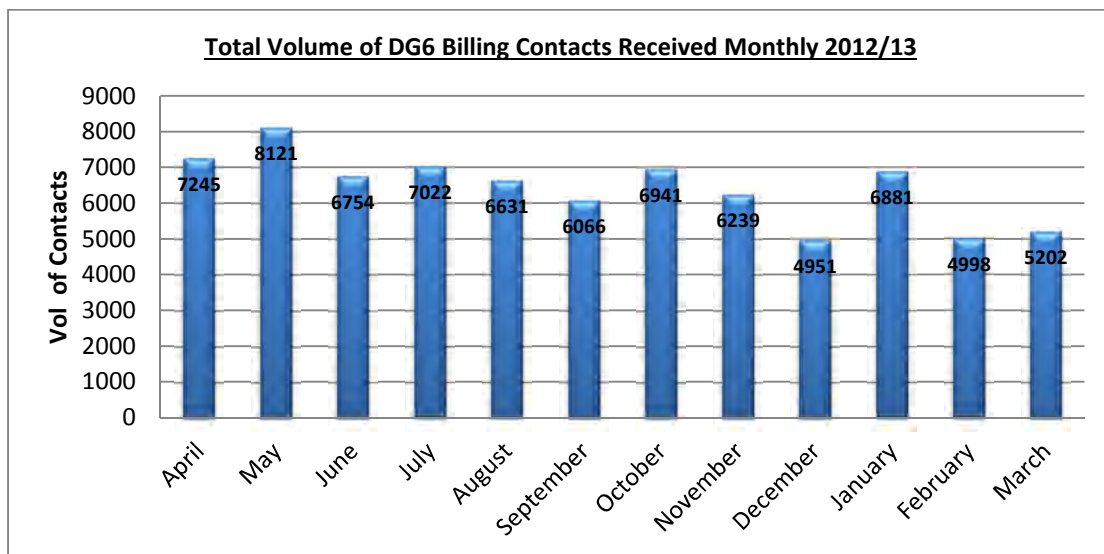
**Top Reasons for Customer Contact**

Table 1 Top 5 Reasons for DG6 contacts

Debit / Credit Card Payment	13%
BI Customer Details Change	10%
P Promise Of Payment	8%
P Payment Received	8%
BI Bill Understanding /explanation	7%

The increase during quarter one was due to a number of reasons:

- The level of Debit/credit card payments continues to be in top 5 reasons due to continued focus on debt collection activities during the year.

The source data for DG6 Table 4 (lines 1 to 5) is reported using the submitted methodology stated for DG6. NIW have closed more contacts than were received during the 2012/13 reporting year, due to concerted efforts by the DG6 team to drive down the number of open contacts that carried over from previous reporting years.

Monthly reports for DG6 (received and closed) are run by Echo and independently validated by the NIW MI & Data Team. On the first working day of each month, the DG6 reports are run for both the current and previous months to accurately update

received and closed figures on a retrospective basis to support the annual reconciliation. Variances are queried with NIW Account Services and Echo and resolved as they arise.

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

Responses

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

DG6 Quality Checking

NIW Contract Office carry out monthly sampling to quality check that contacts are being logged correctly within the Rapid system. The checks include validation that the contact is a DG6, confirmation that the CMS codes are correct, that the date of closure is correct and that the response issued is substantive. Any areas of concern are then fed back to the relevant teams who provide a written response with agreed actions.

Billing (DG6) Project

There has been continuous focus to improve DG6 performance, reduce call volumes and improve the handling of billing contacts. A Billing project was initiated in 11/12 containing the five Work streams below:

1. Billing processes review/ Case Management and Workflow Implementation to Account Services
2. Billing Channels and Functionality
3. Adjustments and Rapid System Processes
4. Billing format review, Bill Print Module Implementation
5. Billing reports and KPI's

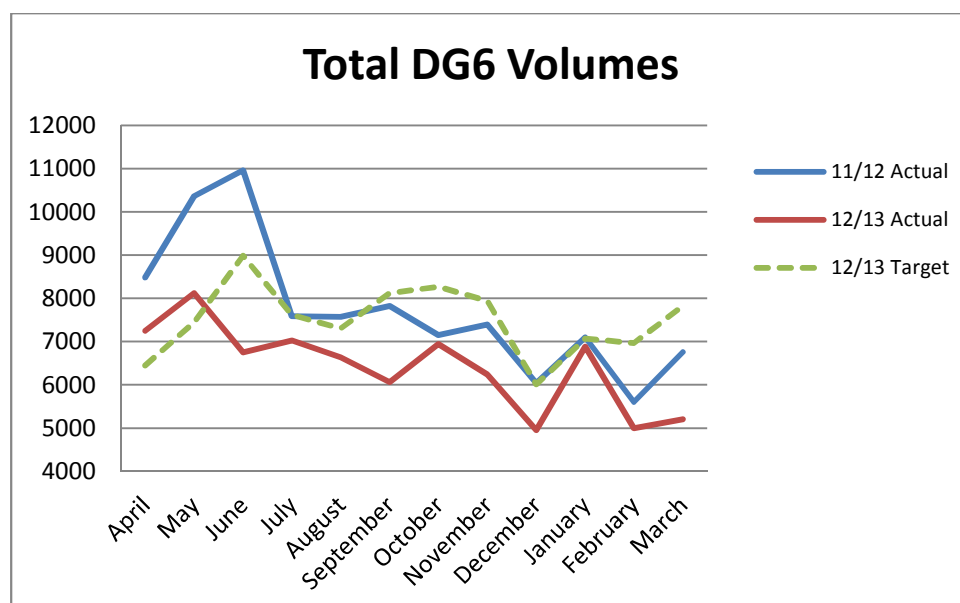
The benefits to be derived from this project in 11/12 were successfully achieved and have been built upon in 12/13. Benefits targeted for 12/13 included the below:

- Reduce DG6 Volumes by a further 5% through improved bill accuracy and customers having a better understanding of their bills. In 12/13 a 16.99% reduction was successfully achieved.
- Reduce DG6 Billing Calls by a further 5%. In 12/13 a 14.23% reduction was successfully achieved.
- Cost reduction due to efficiencies gained

Significant progress has been achieved against objectives over the past year and benefit targets have been realised. See table below.

Table 2 Key Metrics to Measure Success of Project

DG6 Contact Type Breakdown	AIR 12 Baseline	Actual AIR13	% Improvement
DG6 Telephone Contacts Received	73760	63266	14.23%
DG6 Written Contacts Received	19072	13785	27.72%
Total DG6 Contacts Received	92832	77051	16.99%



The scope of the project in 12/13 included:

- The delivery of a Savvion Case Management and Workflow solution to Account Services to assist with the case management of Billing contacts and customer complaints. This enables a faster turnaround time for resolution of contacts and can provide clearer management information.
- The implementation of a Rapid Bill Print system upgrade along with a revised bill format to assist with Bill understanding and other billing process improvements. A revised Recovery letter format shall also be rolled out in Qtr. 1 13/14.
- Further streamlining of processes within the Account Services which included the introduction of flexible working within the team.
- Input to the new NIW website design and content - to provide Billing and Metering information to help with bill understanding and leakage responsibilities for example.
- Review and development of existing Billing and Metering CMS codes to assist with Management Information and drive future service improvements.

Other planned improvement projects for 13/14 such as Self Service and Web improvements should also help drive down the number of DG6 contacts received and improve levels of Customer Service with regards to Billing.

Line 6 – Number of Properties Connected for Water Supply Only

AIR12 figure – 149579

AIR13 figure - 152771

The net increase of circa 3000 properties during the 12/13 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 Line 1, Table 3 Line, 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 2012/13 reporting year
- 2) Added as a result of a customer contact. E.g. septic tank empty request, no water complaint 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 aims to close)
- 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 customer contacts NI Water they quote the verified postal address which is different, therefore creating a duplicate. Another example - The street name may have changed from the time of New Connection to time of customer contact – street names can change in the early stages of site developments.

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 been put in place to address this issue. 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 Integrity 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

AIR12 figure – 660788

AIR13 figure – 665189

There has been a net increase of circa 4400 properties connected for water and sewerage services during the 12/13 year.

Line 8 - Number of Properties Connected for Sewerage Services Only

AIR12 figure – 25

AIR13 figure – 25

The number of properties connected for sewerage only has remained the same during the 12/13 year.

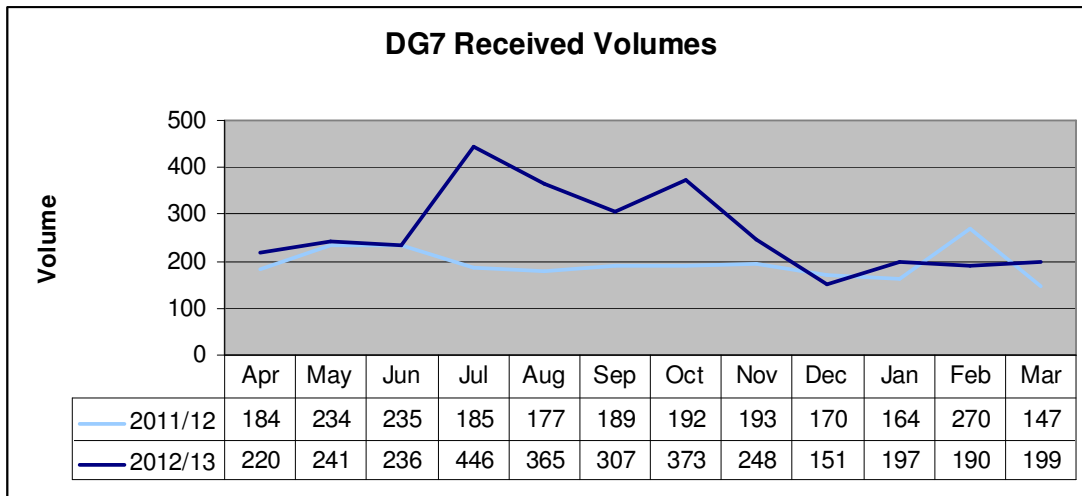
NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

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

DESCRIPTION	UNITS	DP	1		2		3		4		5		6		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG	2012-13	CG	
A DG7 RESPONSE TO WRITTEN COMPLAINTS															
1	Total written complaints	nr	0	2,644	B2	3,727	B4	3,469	B4	4,327	B2	2,340	B2	3,173	B2
2	Number dealt with within 10 working days	nr	0	2,394	B2	3,636	B4	3,449	B4	4,326	B2	2,323	B2	3,166	B2
3	Percentage dealt with within 10 working days	%	2	90.5	B2	97.6	B4	99.4	B4	100.0	A1	99.27	A1	99.78	A1
4	Number dealt with in more than 20 working days	nr	0	10	B2	16	B4	14	B4	4	B2	0	B2	1	B2
5	Percentage dealt with in more than 20 working days	%	2	0.4	B2	0.4	B4	0.4	B4	0.1	A1	0.00	A1	0.03	A1
B DG8 BILLS FOR METERED CUSTOMERS															
6	Total metered accounts	nr	0	78,444	A2	84,075	B2	85,540	B2	100,071	A1	103,876	A1	110,164	A1
7	Metered accounts excluded from indicator	nr	0	1,126	A2	17,692	B2	17,447	B2	32,275	A1	36,388	A1	42,688	A1
(i) NO. OF CUSTOMERS WITH METERED ACCOUNTS RECEIVING AT LEAST ONE BILL DURING YEAR BASED ON METER READING:															
8	Company readings	nr	0	55,401	A2	61,751	B2	62,553	B2	65,028	A1	65,928	A1	66,557	A1
9	Company or customer readings (or both)	nr	0	55,517	A2	61,904	B2	62,825	B2	65,156	A1	66,057	A1	66,622	A1
(ii) NUMBER OF CUSTOMERS WITH METERED ACCOUNTS RECEIVING:															
10	Estimated bills only	nr	0	2,836	A2	3,901	B2	4,971	B2	2,394	A1	1,076	A1	550	A1
11	No bills received during the report year	nr	0	18,965	A2	578	B2	297	B2	246	A1	355	A1	304	A1
12	Unread by company for 2 years	nr	0	9,930	A2	895	B2	1,074	B2	1,048	A1	470	A1	310	A1
C DG9 TELEPHONE CONTACT															
13	Total calls received on customer contact lines	nr	0	322,318	B2	321,720	A2	351,864	A2	340,989	A2	231,245	A2	219,399	A2
14	All lines busy	nr	0	0	B2	0	A2	0	A2	699,566	A2	0	A2	0	A2
15	Total of calls not abandoned	nr	0	318,944	B2	318,129	A2	342,795	A2	300,722	A2	229,270	A2	216,006	A2
16	Call handling satisfaction	nr	2	4.23	B2	4.40	A2	4.60	A2	4.59	A1	4.57	A1	4.54	A1
17	Total telephone complaints	nr	0	22,636	B2	33,102	A2	47,860	A2	62,507	A2	51,680	A2	73,158	A2
D SPECIAL ASSISTANCE REGISTER															
18	Customers on the special assistance register	nr	0	N/C		N/C		546	A2	1,112	A2	1,990	A2	2,675	A2

Table 5 – Customer Service 2**DG7 Received Volumes**

The chart below shows the DG7 received volumes during 11/12 and 12/13.



The chart shows an increase in the overall volume of written complaints received in 12/13 compared to the previous year.

The spike in volume during Q2 12/13 can be attributed to the impact of reclassified test meter bills being issued in June and liability being contested in the subsequent months.

Also, on the operational side, flooding incidents in June increased the volume received by both customers and their Elected Representatives post-clean-up throughout the quarter and into Q3.

Similar to 11/12, “Charges & Bills” complaints made up over just short of half of the total volume received. These were for a variety of reasons including:

- Over eight hundred complaints were recorded as being from customers disputing liability for their bills. The disputes were for a variety of reasons including those disputing the diameter of the supply pipe on which their standing charge was based, disputing back billing following updates to pipe size and those changed to revenue-bearing from test meter status as part of data quality projects throughout the year.
- Almost one hundred complaints were recorded as being about leak allowances.

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

Based on data extracted on 23 April 2013:

- 24 DG7 contacts received during 12/13 complaints were open;
- the oldest open DG7 complaint received during 12/13 was 167 working days old;
- 24 DG7 contacts received during 12/13 were open for more than 10 working days, each pending completion of agreed actions as outlined in substantive responses; and
- the average age of the open DG7 contacts received during 12/13 was 45 working days.

6 of the 24 open complaints remain open on RapidXtra due to a system issue preventing physical closure of the CMS contacts. A forthcoming IT fix, or patch, seeks to resolve this issue. The associated complaints are fully resolved; only the CMS contacts themselves remain open. Removal of these complaints from the yearend data would change the average age of the open DG7 complaints received during 12/13 to 36 working days.

Petitions

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

CCNI Annual Complaints Assessment

The assessment process is currently under joint review. The next assessment is provisionally scheduled for June 13/14.

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.

Complaints about Contractors

Following recommendation from the Reporter, a process has been designed to record written complaints received directly by PPP concessionaires (or other contractors working on NI Water's behalf). This was communicated to management for circulation in Q1 12/13.

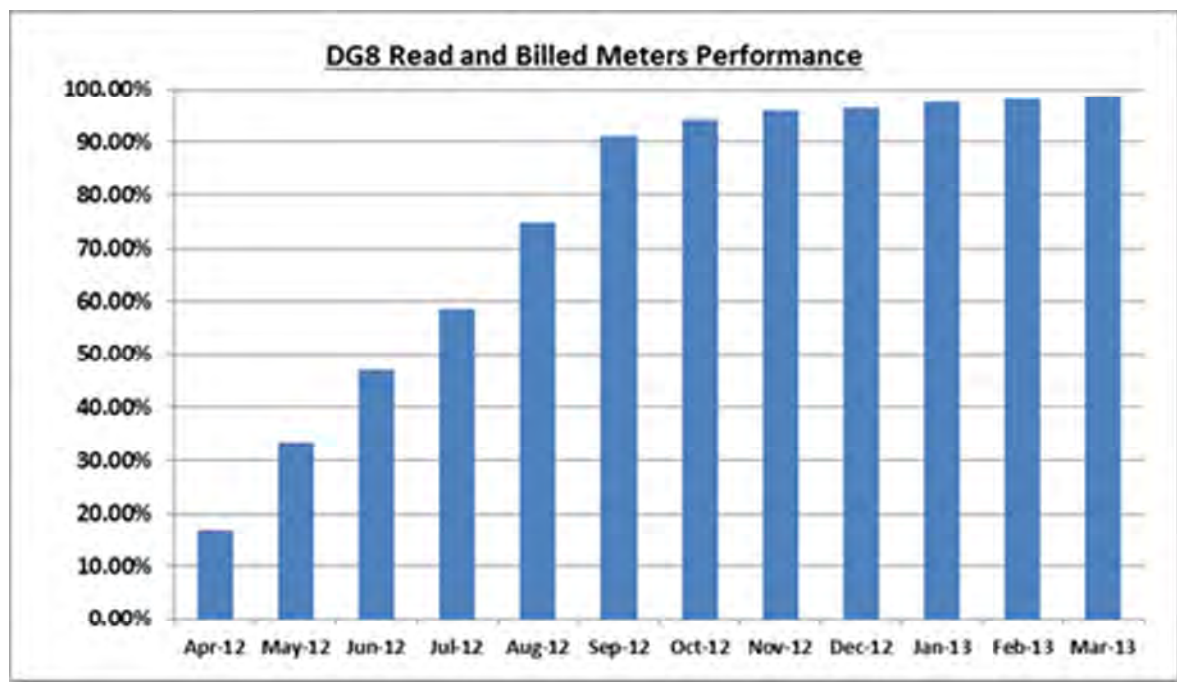
A total of 3 complaints of this nature were recorded via this process during the reporting period.

Exclusions

A total of 18 written customer complaints have been excluded from DG7 reporting during 12/13 for a variety of exclusion reasons as per the Level of Service Methodology.

DG8 – Bills for metered customers

DG8 performance was 98.73% against an increased target of 98.5%. This out-turn performance was an increase of 0.85% on DG8 reads in 11/12. The increased percentage read was achieved in conjunction with an increased in the meter stock from the following year.

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

Graph 1.0 Cumulative increase in DG8 reads throughout the course of the 12/13 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, 91.18% 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 2012/13 of 3753, from 4163 in 2011/12. 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 for 13/14 remains fixed at a challenging 98.5% before increasing to 99.00% in 14/15. However, the increasing number for meters necessitates an increase in meter reads irrespective of a change in performance targets.

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

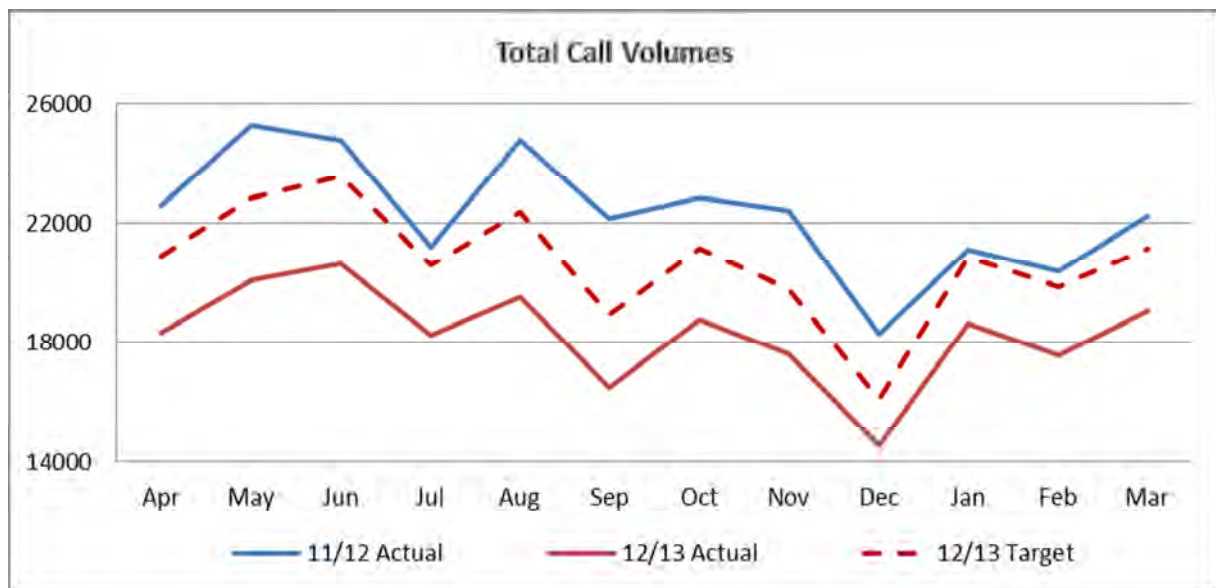
billing purposes by using the On-line facility available on our website, email or by calling our billing line.

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

DG9 Introduction

During the reporting year a total of 219,399 calls were made to the advertised Company telephone numbers. Of this a total of 216,006 were answered and 3,993 calls were abandoned.

The graph below shows a comparison against 11/12 and against our target level of calls.



All Lines Busy

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

Calls Abandoned

3,993 calls were abandoned during the reporting year. The Company's performance of 98.45% of 'calls not abandoned' failed to meet the 99% target set for the year. Failure of this measure is largely due to an unexpected rain fall episode on the 27/28th June. The CRC received a spike in calls during this time period that overwhelmed the available call handlers resulting in a spike in volume of abandoned calls. In addition to this, the introduction of HVCA has resulted in a number of first time users abandoning before the system has an opportunity to match them to the shadow database and deal with their issue, which also increases the volume of reported abandoned calls.

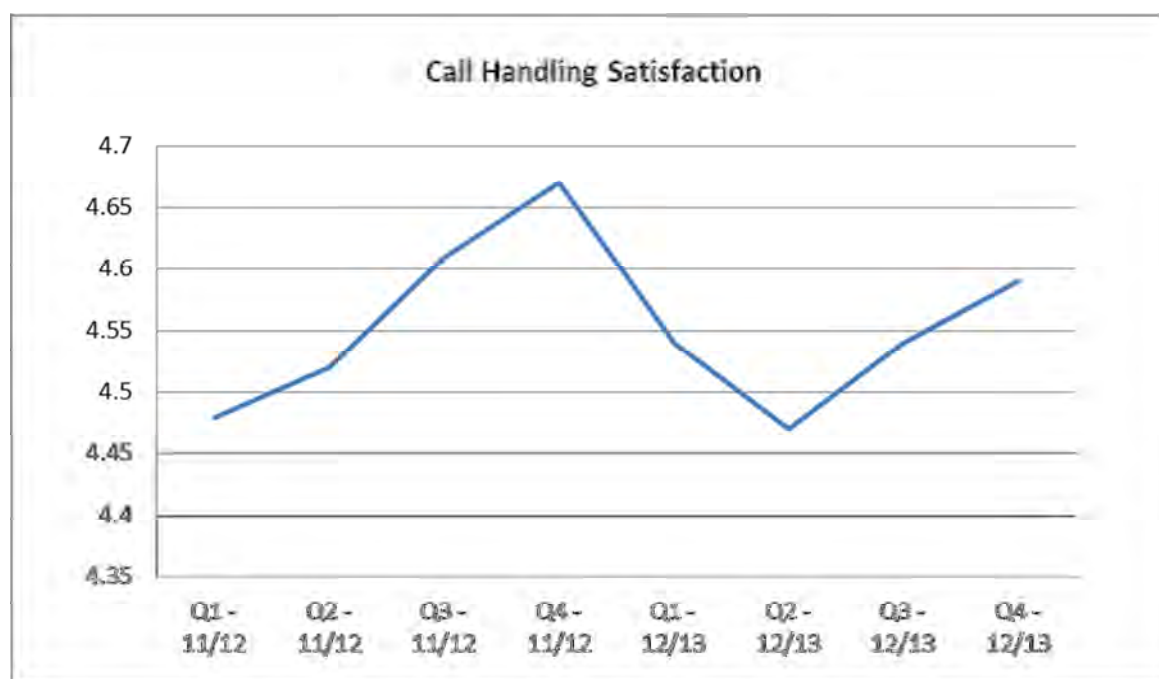
Calls Rejected

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 2,382 (versus 4,190 in 11/12) rejected calls made outside of published working hours

recorded during the 12/13 reporting period. The customer received the appropriate out of hours message.

Call Handling Satisfaction

Customer's satisfaction with regards call handling is assessed by McCallum Layton, an independent market research company. 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 4.54/5.0 for the reporting year. The graph below shows the quarterly scores for the last eight quarters. The company analyses this research to determine areas of customer dissatisfaction, identifying root causes and proposing plans for corrective action and increased customer satisfaction.



Customers on the Special Assistance Register

A substantial amount of work has been carried out to increase numbers on the register and to improve the level of service provided to the more vulnerable of our customers. At end March 2013 there were a total of 2,675 individuals/organisations on the register.

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. NI Direct would 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, although NI Water is still operating on a manual basis. The priority is to re-establish an automated connection 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. This is planned for early 2013/14.

During the reporting period circa 380 jobs were received by the Company through this process.

HVCA

HVCA 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.

The HVCA system was introduced in 'test and tune' mode in December 2012. Initially it was deployed in HVCA first mode which meant that all calls to Waterline were being diverted to the Cable and Wireless Network IVR system. The caller was presented with a menu selection and depending on the option selected, passed to either the CRC agent for Septic Tank or New Connection queries or entered into the HVCA call routing plan to deal with trouble calls. If the caller was not dealt with within the HVCA system they would have exited the system and transferred to an agent.

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 handler. If call handlers are already dealing with calls the caller will enter into the HVCA call routing plan to have their issue logged.

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 customers who have called the Company each quarter.

Telephone Complaints

Telephone complaints cover any telephone call from a customer or a customers 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 12/13 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 therefore increased to 73,158 received during the reporting period.

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. The process of reconciliation between the telephony systems is largely manual; 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.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 5A KEY OUTPUTS

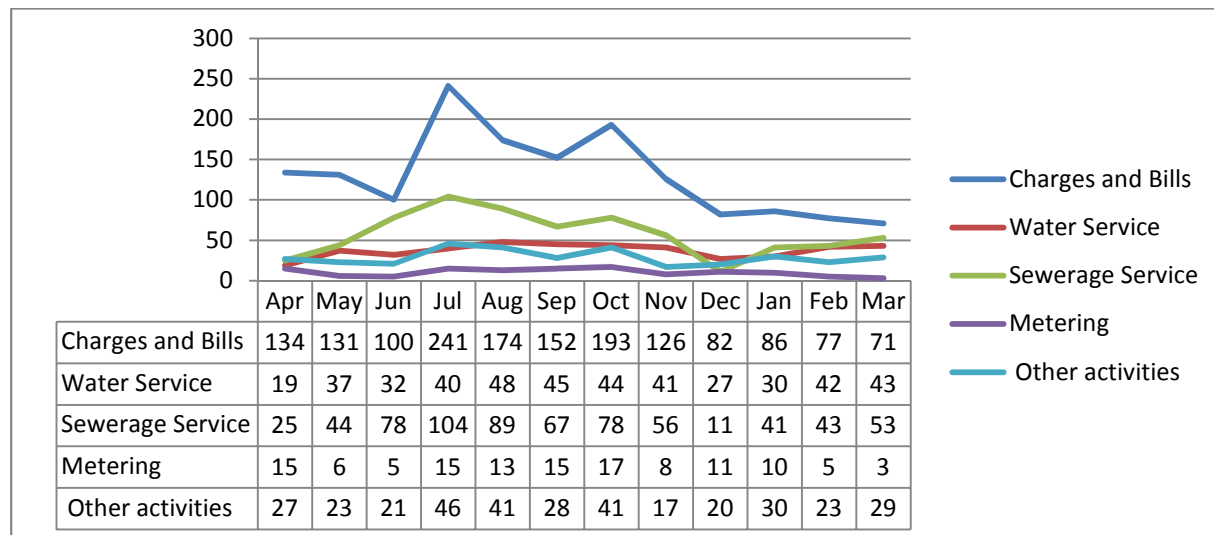
Customer complaints data for Consumer Council for Northern Ireland (TOTAL)

DESCRIPTION	UNITS	DP	1		2		3		4		5		6	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG	2012-13	CG
A TOTAL WRITTEN COMPLAINTS														
1 Total written complaints	nr	0	2,364	B2	3,727	B4	3,469	B4	4,327	B2	2,340	B2	3,173	B2
2 Number dealt with within 10 working days	nr	0	2,268	B2	3,636	B4	3,449	B4	4,326	B2	2,323	B2	3,166	B2
3 Number dealt with in more than 20 working days	nr	0	10	B2	16	B4	14	B4	4	B2	0	B2	1	B2
B CATEGORY OF WRITTEN COMPLAINTS														
(i) Charges and Bills														
4 Total written complaints about charging and billing issues	nr	0	820		1,577	B2	1,345	B2	814	B2	1,081	B2	1,567	B2
5 Total written complaints about charging and billing issues escalated to second stage review	nr	0	N/C		36	B2	n/a		n/a		221	B2	381	B2
(ii) Water Service														
6 Total written complaints about water service issues	nr	0	366		822	B2	622	B2	2,453	B2	408	B2	448	B2
7 Total written complaints about water service issues escalated to second stage review	nr	0	N/C		18	B2	n/a		n/a		77	B2	71	B2
(iii) Sewerage Service														
8 Total written complaints about sewerage service issues	nr	0	771		1,024	B2	914	B2	312	B2	329	B2	689	B2
9 Total written complaints about sewerage service issues escalated to second stage review	nr	0	N/C		7	B2	n/a		n/a		57	B2	82	B2
(iv) Metering														
10 Total written complaints about metering issues	nr	0	32		71	B2	92	B2	39	B2	86	B2	123	B2
11 Total written complaints about metering issues escalated to second stage review	nr	0	N/C		2	B2	n/a		n/a		23	B2	25	B2
(v) Other activities														
12 Total written complaints about other service issues or activities	nr	0	375		233	B2	496	B2	709	B2	436	B2	346	B2
13 Total written complaints about other service issues or activities escalated to second stage review	nr	0	N/C		7	B2	n/a		n/a		113	B2	82	B2
C OTHER CUSTOMER RESPONSE MEASURES														
14 Number of holding responses issued	nr	0									n/a		695	B4
15 Consumer Council investigations	nr	0									52	B2	27	B2

Table 5a – Customer Complaints Data for CCNI

DG7 Received Annual Profile & Explanation

The volume of DG7 complaints received each month during 12/13 by type is shown in the chart below.



This shows that the predominant type month-on-month was “Charges & Bills” with a sharp incline from June. This can be attributed, in part, to the impact of reclassified test meter bills being issued in June and liability being contested in the subsequent months.

The rise in “Sewerage Service” complaints in June is linked to flooding incidents at the time. These events impacted the volume received from both customers and their Elected Representatives post-cleanup throughout the quarter and into Q3.

Second Stage Complaints

Systems remained in place to enable the reporting of complaints escalated to second stage review throughout 12/13.

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.

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

PC10 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 of holding responses issued throughout 12/13. 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 12/13 owing to pending investigations linked to open DG7 contacts. 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 also includes holding responses issued within 12/13 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	5	6	
			REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10	CG	REPORTING YEAR 2010-11	CG	REPORTING YEAR 2011-12
A REVENUE OUTSTANDING - MEASURED HOUSEHOLDS									
1 Total revenue outstanding < 48 months (measured households)	£m	3							
2 Number of measured households with outstanding revenue < 48 months	nr	0							
3 Revenue outstanding < 3 months (measured households)	£m	3							
4 Number of measured households with outstanding revenue < 3 months	nr	0							
5 Revenue outstanding 3 - 12 months (measured households)	£m	3							
6 Number of measured households with outstanding revenue 3 - 12 months	nr	0							
7 Revenue outstanding 12 - 24 months (measured households)	£m	3							
8 Number of measured households with outstanding revenue 12 - 24 months	nr	0							
9 Revenue outstanding 24 - 36 months (measured households)	£m	3							
10 Number of measured households with outstanding revenue 24 - 36 months	nr	0							
11 Revenue outstanding 36 - 48 months (measured households)	£m	3							
12 Number of measured households with outstanding revenue 36 - 48 months	nr	0							
13 Revenue outstanding > 48 months (measured households)	£m	3							
14 Number of measured households with outstanding revenue > 48 months	nr	0							
B REVENUE OUTSTANDING - UNMEASURED HOUSEHOLDS									
15 Total revenue outstanding < 48 months (unmeasured households)	£m	3							
16 Number of unmeasured households with outstanding revenue < 48 months	nr	0							
17 Revenue outstanding <3 months (unmeasured households)	£m	3							
18 Number of unmeasured households with outstanding revenue < 3 months	nr	0							
19 Revenue outstanding 3-12 months (unmeasured households)	£m	3							
20 Number of unmeasured households with outstanding revenue 3 - 12 months	nr	0							
21 Revenue outstanding 12-24 months (unmeasured households)	£m	3							
22 Number unmeasured households with outstanding revenue 12 - 24 months	nr	0							
23 Revenue outstanding 24-36 months (unmeasured households)	£m	3							
24 Number of unmeasured households with outstanding revenue 24 - 36 months	nr	0							
25 Revenue outstanding 36-48 months (unmeasured households)	£m	3							
26 Number of unmeasured households with outstanding revenue 36 - 48 months	nr	0							
27 Revenue outstanding >48 months (unmeasured households)	£m	3							
28 Number of unmeasured households with outstanding revenue > 48 months	nr	0							
C REVENUE OUTSTANDING - MEASURED NON HOUSEHOLDS									
29 Total revenue outstanding < 48 months (measured non households)	£m	3		7.875	12.721 A2	10.796 A2	7.348 A2	7.972 A2	
30 Number of measured non households with outstanding revenue < 48 months	nr	0		27160	20,254 A2	17,708 A2	14,284 A2	15,348 A2	
31 Revenue outstanding < 3 months (measured non households)	£m	3		5.913	9,556 A2	9,232 A2	6,179 A2	6,891 A2	
32 Number of measured non households with outstanding revenue < 3 months	nr	0		13002	12,754 A2	13,846 A2	10,951 A2	10,588 A2	
33 Revenue outstanding 3 - 12 months (measured non households)	£m	3		1.962	3,165 A2	1,564 A2	1,169 A2	0,952 A2	
34 Number of measured non households with outstanding revenue 3 - 12 months	nr	0		14158	7,500 A2	3,862 A2	3,333 A2	2,925 A2	
35 Revenue outstanding 12 - 24 months (measured non households)	£m	3			0.000 A1	0.000	0.000	0.012 A2	
36 Number of measured non households with outstanding revenue 12 - 24 months	nr	0		0	0 A1	0	0	1,049 A2	
37 Revenue outstanding 24 - 36 months (measured non households)	£m	3			0.000 A1	0.000	0.000	0.117 A2	
38 Number of measured non households with outstanding revenue 24 - 36 months	nr	0			0 A1	0	0	786 A2	
39 Revenue outstanding 36 - 48 months (measured non households)	£m	3			0.000 A1	0.000	0.000	0.000	
40 Number of measured non households with outstanding revenue 36 - 48 months	nr	0			0 A1	0	0	0	
41 Revenue outstanding > 48 months (measured non households)	£m	3			0.000 A1	0.000	0.000	0.000	
42 Number of measured non households with outstanding revenue > 48 months	nr	0			0 A1	0	0	0	
D REVENUE OUTSTANDING - UNMEASURED NON HOUSEHOLDS									
43 Total revenue outstanding < 48 months (unmeasured non households)	£m	3		0.584	0.302 A2	0.163 A2	3.083 A2	0.402 A2	
44 Number of unmeasured non households with outstanding revenue < 48 months	nr	0		5647	3,238 A2	1,304 A2	10,805 A2	1,542 A2	
45 Revenue outstanding <3 months (unmeasured non households)	£m	3		0.173	0.042 A2	0.040 A2	2.812 A2	0.111 A2	
46 Number of unmeasured non households with outstanding revenue < 3 months	nr	0		198	516 A2	219 A2	9,836 A2	155 A2	
47 Revenue outstanding 3 -12 months (unmeasured non households)	£m	3		0.411	0.260 A2	0.123 A2	0.271 A2	0.025 A2	
48 Number of unmeasured non households with outstanding revenue 3 - 12 months	nr	0		5449	2,722 A2	1,085 A2	969 A2	256 A2	
49 Revenue outstanding 12-24 months (unmeasured non households)	£m	3			0.000 A1	0.000	0.000	0.241 A2	
50 Number unmeasured non households with outstanding revenue 12 - 24 months	nr	0			0 A1	0	0	894 A2	
51 Revenue outstanding 24-36 months (unmeasured non households)	£m	3			0.000 A1	0.000	0.000	0.025 A2	
52 Number of unmeasured non households with outstanding revenue 24 - 36 month	nr	0			0 A1	0	0	237 A2	
53 Revenue outstanding 36 -48 months (unmeasured non households)	£m	3			0.000 A1	0.000	0.000	0.000	
54 Number of unmeasured non households with outstanding revenue 36 - 48 month	nr	0			0 A1	0	0	0	
55 Revenue outstanding >48 months (unmeasured non households)	£m	3			0.000 A1	0.000	0.000	0.000	
56 Number of unmeasured non households with outstanding revenue > 48 months	nr	0			0 A1	0	0	0	
E REVENUE WRITTEN OFF									
57 Amount of revenue written off from measured households	£m	3		N/C		0.000 A1	0.000		
57a Amount of revenue written off from measured non-households	£m	3		0.815	0.170	0.340 A2	1.534 A2	0.957 A2	
58 Amount of revenue written off from unmeasured households	£m	3		N/C		0.000 A1	0.000		
58a Amount of revenue written off from unmeasured non-households	£m	3		0.005	0.000	0.013 A2	0.070 A2	0.173 A2	
F CUSTOMER SERVICES OPERATING EXPENDITURE									
59 General customer services operating expenditure Total	£m	3		17.579	16.873	18.558 A2	6.667 A2	6.745 A2	
i Employment costs	£m	3				3.621 A2	3.168 A2	3.862 A2	
ii Fired and contracted costs	£m	3				13.474 A2	2.731 A2	3.129 A2	
iii Other	£m	3				1.376 A2	1.429 A2	0.686 A2	
iv Adjustments	£m	3				0.087 A2	-0.661 B3	-0.932 B3	
60 Outstanding revenue collection operating expenditure (households)	£m	3		N/C	N/C	N/C	N/C	N/C	
60a Outstanding revenue collection operating expenditure (non households)	£m	3					2.009 DX	2.118 DX	
61 Donations to charitable trusts assisting customers in debt (households)	£m	3		N/C	N/C	N/C	N/C	N/C	
62 Operating expenditure due to vulnerable household customers	£m	3		N/C	N/C	N/C	N/C	N/C	
63 Total customer services operating expenditure	£m	3		17.579	16.873	18.558 A2	6.667 A2	8.754 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 2013 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 £1.05m due to NIW from DRD for subsidy at 31 March 2013.

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 2013.

At 31 March 2013 the closing trade debtor balance was £7.972m. Trade Debtors increased this year largely due to a lower reduction (£1.55m in 2012/13, down from £2.2m in 2011/12) in measured income to take account of anticipated future system adjustments.

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:

- £0.4m for debt over 4 years
- £0.5m for debt 3 - 4 years
- £0.8m for debt 2 – 3 years
- £1.3m for debt 1 – 2 years
- £1.0m for debt 90 – 365 days
- £0.4m 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. £1.99m more than the detailed debtors listing provided by Echo. This was due to the following:

- Referred bills (€0.23m)
- Future system adjustments (€1.55m)
- Future measured sewerage adjustment (€0.21m)

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 2012/13 outstanding from measured non households for less than 48 months. Balance as at 31 March 2013 was £7.972m.

Row 30 – Number of Measured Non-Households with Outstanding Revenue < 48 months: The number of measured non households at the end of 2012/13, with revenue outstanding for less than 48 months. Total at 31 March 2013 was 15,348. The number of households has been adjusted in line with the decrease in debtors taking account of anticipated future system adjustments of £1.55m, future measured sewerage adjustments of £0.21m and referred bills £0.23m. The £1.99m is approximately 13% of total outstanding debtors at 31 March 2013 of £14.96m. An assumption was made to apply a 13% reduction across all measured revenue age groups up to 24 months.

Row 31 – Revenue Outstanding < 3 months (Measured Non Households): The total amount of revenue at the end of 2012/13 that has been outstanding from measured non households for less than 3 months. Balance as at 31 March 2013 was £6.891m.

Row 32 – Number of Measured Non-Households with Outstanding Revenue < 3 months: The number of measured non households at end of 2012/13, with revenue outstanding for less than 3 months. As at 31 March 2013 this totalled 10,588.

Row 33 – Revenue Outstanding 3-12 months (Measured Non Households): The total amount of revenue at the end of 2012/13 that has been outstanding from measured non households for at least 3 months but less than 12 months. Balance as at 31 March 2013 was £0.952m.

Row 34 – Number of Measured Non-Households with Outstanding Revenue 3-12 months: The number of measured non households at end of 2012/13 with revenue that has been outstanding for at least 3 months but less than 12 months. At 31 March 2013 this totalled 2,925.

Row 35 – Total Revenue Outstanding 12-24 months (Measured Non Households): The total amount of revenue at the end of 2012/13 outstanding from measured non households for at least 12 months but less than 24 months. At 31 March 2013 this totalled £0.012m. In previous years the reported value was zero. The change has arisen because the bad debt provision in 2012/13 does not fully provide against low risk debt until it is more than 36 months old. In previous years low risk debt over 12 months old was fully provided.

Row 36 – Number of Measured Non-Households with Outstanding Revenue 12-24 months: The number of measured non households at end of 2012/13 with revenue that has been outstanding for at least 12 months but less than 24 months. At 31 March 2013 this totalled 1,049. See explanation at Row 35 above for zero values in previous years.

Row 37 – Total Revenue Outstanding 24-36 months (Measured Non Households): The total amount of revenue at the end of 2012/13 outstanding from measured non households for at least 24 months but less than 36 months. At 31

March 2013 this totalled £0.117m. See explanation at Row 35 above for zero values in previous years.

Row 38 – Number of Measured Non-Households with Outstanding Revenue 24-36 months: The number of measured non households at end of 2012/13 with revenue that has been outstanding for at least 24 months but less than 36 months. At 31 March 2013 this totalled 786. See explanation at Row 35 above for zero values in previous years.

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 2013 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 2013.

- At 31 March 2013 the closing trade debtor balance was £0.402m. (31 March 2012, £3.083m). The reason for the decrease is due to the 2012/13 annual billing invoices for £2.8m which were raised in March 2012 and held in the balance sheet as deferred income to be released in 2012/13.

The debtor balance reported figure is made up of unmeasured water and sewerage debtors less bad debt provision. The bad debt provision is £0.166m and is made up of the following:

- £0.018m for debt over 4 years
- £0.019m for debt 3 - 4 years
- £0.032m for debt 2 – 3 years
- £0.055 for debt 1 – 2 years
- £0.035 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 2012/13 outstanding from unmeasured non households for less than 48 months. Balance at 31 March 2013 was £0.402m.

Row 44 – Numbers of Unmeasured Non-Households with Outstanding Revenue < 48 months: The number of unmeasured non households at the end of 2012/13 with revenue that has been outstanding for less than 48 months. Total at 31 March 2013 was 1,542.

Row 45 – Revenue Outstanding < 3 months - Unmeasured Non Households: The total amount of revenue at the end of 2012/13 outstanding from unmeasured non households for less than 3 months. Balance at 31 March 2013 was £0.111m.

Row 46 – Numbers of Unmeasured Non-Households with Outstanding Revenue < 3 months: The number of unmeasured non households at the end of 2012/13 with revenue outstanding for less than 3 months. Total at 31 March 2013 was 155.

Row 47 – Revenue Outstanding 3-12 months - Unmeasured Non Households: The total amount of revenue at the end of 2012/13 outstanding from unmeasured non households for at least 3 months but less than 12 months. Balance at 31 March 2013 was £0.025m.

Row 48 – Numbers of Unmeasured Non-Households with Outstanding Revenue 3-12 months: The number of unmeasured non households at end of 2012/13 with revenue outstanding for at least 3 months but less than 12 months. Total at 31 March 2013 was 256.

Row 49 – Revenue Outstanding 12-24 months - Unmeasured Non Households: The total amount of revenue at the end of 2012/13 outstanding from unmeasured non households for at least 12 months but less than 24 months. Balance at 31 March 2013 was £0.241m. In previous years the reported value was zero. The change has arisen because the bad debt provision in 2012/13 does not fully provide against low risk debt until it is more than 36 months old. In previous years low risk debt over 12 months old was fully provided.

Row 50 – Numbers of Unmeasured Non-Households with Outstanding Revenue 12-24 months: The number of unmeasured non households at end of 2012/13 with revenue outstanding for at least 12 months but less than 24 months. Total at 31 March 2013 was 894. See explanation at Row 49 above for zero values in previous years.

Row 51 – Revenue Outstanding 24-36 months - Unmeasured Non Households: The total amount of revenue at the end of 2012/13 outstanding from unmeasured non households for at least 24 months but less than 36 months. Balance at 31 March 2013 was £0.025m. See explanation at Row 49 above for zero values in previous years.

Row 52 – Numbers of Unmeasured Non-Households with Outstanding Revenue 24-36 months: The number of unmeasured non households at end of 2012/13 with revenue outstanding for at least 24 months but less than 36 months. Total at 31 March 2013 was 237. See explanation at Row 49 above for zero values in previous years.

Row 53 – Revenue Outstanding 36-48 months - Unmeasured Non Households: The total amount of revenue at the end of 2012/13 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 2013 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

£1.267m (2011/12, £1.014m). The increase is a result of a management focus in reducing overall debt levels including write-offs where necessary and in particular aged debt in 2012/13.

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.	N/A
>£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 2012/13 was £1.094m (2011/12, £0.957m). Write-offs in the year are similar to 2011/12. The increase is a result of a management focus in reducing overall debt levels and in particular aged debt in 2012/13.

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 2012/13 was £0.173m (2011/12, £0.057m). The increase is a result of a management focus in reducing overall debt levels and in particular aged debt in 2012/13.

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

Initially, the total debtors (debit balances) at the end of March 2012 were reviewed, taking into account the outstanding balance and the age of the debt. This was reviewed on a quarterly basis throughout 2012/13. The following steps were taken:

- The top 100 customers were individually reviewed;
- Large commercial entities were reviewed; e.g. [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 £1.55m of future system adjustments.

Debtors was reduced by £1.55m in March 2013 and the bad debt provision calculated on the reduced debt was decreased by £0.5m.

Bad Debt Provision Summary

The following is a summary of the bad debt provision at 31 March 2013 and 31 March 2012:

	2013	2012
	£m	£m
Measured water & sewerage	4.264	4.667
Unmeasured water & sewerage	0.166	0.407
Trade effluent	0.221	0.283
Total	4.651	5.357

Subsidy

NI Water received £265.1m subsidy in relation to household customers in 2012/13 with nothing outstanding from DRD at 31 March 2013.

NI Water received £13.46m subsidy in relation to non-household customers and at 31 March 2013 an amount of £1.05m was outstanding from DRD. The total subsidy for non-households for the year ended 31 March 2013 was £14.51m.

Lines 59 to 63 – Customer Services Operating Expenditure

Row 59 – General customer services operating expenditure: The row 59 total of £6.418M in AIR13 is a £0.3M decrease against the costs of £6.745M in AIR12. This arises for the following reasons:

Employment costs (decrease of 0.2M (5%)).

Hired and contracted costs (increase of 0.0M (0%)).

Other costs (decrease of 0.1M (11%)).

Adjustments (decrease of 0.1M (8%)).

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

Row 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.

Row 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 costs was added to this. There is a confidence grading of DX, as there was no formal system in place to gather these costs.

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

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

Row 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'.

Row 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		6		7		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		CURRENT YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG	2012-13	CG	2012-13	CG	
A PROPERTIES																	
1	Household properties connected during the year	000	3	7.595		8.358	B3	4.457	B3	4.748	B2	3.838	B2	4.154	B2		
2	Non-household properties connected during the year	000	3	1.482		0.723	B3	0.272	B3	0.284	B2	0.329	B2	0.195	B2		
B BILLING																	
3	Households billed unmeasured water	000	3	634.990		646.099	C3	654.625	C3	663.353	C2	672.816	A2	681.095	A2	683.570	A2
4	Households billed measured water (external meter)	000	3	30.398		0.000	C3	0.000	C3	0.000	A1	0.000	A1	0.000	A1	0.000	A1
5	Households billed measured water (not external meter)	000	3	0.000		0.000	C3	0.000	C3	0.000	A1	0.000	A1	0.000	A1	0.000	A1
6	Households billed water	000	3	665.388		646.099	C3	654.625	C3	663.353	C2	672.816	A2	681.095	A2	683.570	A2
7	Household properties (water supply area)	000	3	712.932		686.036	C3	693.005	C3	702.825	C2	713.341	A2	721.698	A2	724.173	A2
8	Non-households billed unmeasured water	000	3	31.341		30.519	C3	16.050	C3	13.648	B3	11.943	A2	10.896	A2	10.108	A2
9	Non-households billed measured water	000	3	42.823		78.416	C3	68.666	C3	68.713	B2	68.674	A2	69.158	A2	70.006	A2
10	Non-households billed water	000	3	74.164		108.935	C3	84.716	C3	82.361	B3	80.617	A2	80.054	A2	80.114	A2
11	Non-household properties (water supply area)	000	3	83.516		116.249	C3	102.636	C3	99.674	B3	93.072	A2	92.466	A2	93.068	A2
12	Void properties	000	3	56.896		49.698	C3	49.572	C3	51.290	B3	52.981	A2	53.015	A2	56.811	A2
C POPULATION																	
13	Population - households billed unmeasured water	000	2	1637.01		1672.51	B3	1685.97	B3	1686.41	B2	1698.55	B2	1709.66	B2		
14	Population - households billed measured water	000	2	85.06		0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1		
15	Population - non-households billed unmeasured water	000	2	8.10		6.67	B3	8.86	B3	8.41	B3	7.61	B3	7.11	B3		
16	Population - non-households billed measured water	000	2	18.36		95.93	B3	95.33	B3	103.66	B3	102.66	B3	102.7	B3		
17	Population - total	000	2	1748.53		1775.11	B2	1790.16	B2	1798.48	B2	1808.82	B2	1819.47	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 was deferred in April 2007 and has not been implemented since. There are no apparent plans for charges to be implemented during 2013/14. 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 AIR13. 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.

As per Reporter Recommendation Interim Principal Statement below – reports have been completed and having identified data issues, NI Water is currently reviewing the process by which the water and sewerage status are updated on Rapid.

<p>NI Water considers how it will confirm that properties recorded as not connected to the water and/or sewerage service are truly not connected.</p>
<p>NI Water reconciles its records of properties with septic tanks with properties billed for water and/or sewerage services which would allow properties with a septic tank not billed for water to be identified and investigated.</p>

There has been further significant focus on customer numbers during 2012/13, primarily due to commitments within PC10/Final Determination submissions and NIW Undertakings. As a result, there have been considerable data shifts from AIR12, most notably in the reclassification of test meters, upload of domestic metered properties and in unmeasured non-domestic numbers.

The roll-out of the metering programme has continued. Overall the number of non-domestic unmeasured properties has decreased from circa 11,250 in March 2012 to 10,500 in March 2013. 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.

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 and reconciled (where possible) with other data collection activities, such as the metering programme and the Diamond reporting database. 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 595 (gross) 'unmeasured – not charged' properties which (based on sample taken) are mostly NI Water premises as per table below.

Unmeasured - Not Charged Properties	Count
NI Water	548
Fire Authority for NI	13
Other	31
No Occupier	3
Grand Total	595

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

Test Meters

NIW previously had significant number of meters classified as 'test' from its legacy databases, which have been cleansed and reclassified as part of our Data Quality Programme.

The Data Quality project finished in March 12, with the last batch of bills from the project released in June 12. Any follow up work required will now be completed in BAU. The results of the test meters review is detailed below:

Test Meter Classification	Count
Commercial	2720
Domestic	5819
NIW	228
Remove	107
Disconnected	174
RFR – Unable to Locate*	480
RFR – Reads*	1155
RFR – Shared Supply*	77
RFR – Compensation Supply*	14
RFR – No billable name / address*	85
Total	10859

Test Meters – Final Review	Count
Resurveys/surveys remaining	39
Total	39

* RFR= Retain for (further) Review

In summary, of the total 10,898 test meters:-

- 10,859 have been classified
- 39 still to have a classification confirmed and are outstanding with the contractor

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.

The Rapid Property Summary for 31st March 2013 indicates a reduction of circa 3000 non-domestic test meters and 1500 domestic test meters during 2012/13 for water services, as a result of our Data Quality programme.

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 579 domestic properties classified as site meters and there will be further investigation and analysis to be completed during 2013/14 to ensure these are classified correctly.

Overall, the number of non-domestic site meters has increased by 221 during 2012/13, driven primarily as a result of extended non-domestic charging.

Unmeasured Household Property Movement

The table below shows year on year reconciliation of property numbers. It sets out how the property numbers have evolved over the reporting year.

Property Numbers	2011/12	2011/12	2012/13	2012/13
	Actual	(plus/minus)	Actual	(plus/minus)
Start of Year	668661		676970	
New/Metered (plus)	3838	plus	4154	plus
Data Cleanse/Backlog (plus)	4081	plus	5362	plus
Test Meters (minus)	595	minus	537	minus
Site Meters (plus)	67	plus	31	plus
Voids (minus)	918	plus	761	minus
End	676970		681791	

In the table above, the figure of 5362 for cleanse/backlog difference can be explained as follows;

Properties added as a result of a customer contact. E.g. septic tank empty request, no water complaint 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 aims to close).
- 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 customer contacts NI Water they quote the verified postal address which is different, therefore creating a duplicate. Another example - The street name may have changed from the time of New Connection to time of customer contact – street names can change in the early stages of site developments.

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 been put in place to address this issue. 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 Integrity 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.

The data quality projects we've been involved in are having direct impacts on numbers, such as test meters, etc.

Data quality is also being pursued through BAU - however the overall future landscape of the scope and scale of these is currently being developed and determined, and the resulting impact on property numbers is unknown.

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)

Additional Information

As Table 7 is based on averages, please find as below actual figures for 1st April 2012, 1st December 2012 and 31st March 2013.

Property Numbers	1st April 2012	1st Dec 2012	31st March 2013
Unmeasured Water Household	676970	682855	685219
Unmeasured Water Non-Household	11267	10744	10525
Metered Water Non-Household	68860	69504	69456
Voids	53270	52852	52760

Confidence Grades

We have kept the confidence grades consistent with those of AIR12. 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. Last year we introduced an automated tool to populate the figures within Table 7 from the Rapid Property Summary – we continued with this method for AIR13.

Lines 13 – 17 Population

The population data used by NI Water has been derived from 2010 based Population Projections obtained from NISRA (Northern Ireland Statistics & Research Agency) website at

<http://www.nisra.gov.uk/archive/demography/population/projections/wni10cc.xls>

As of the start of May 2013, NISRA have not yet made available the forecast population data based on the 2011 Census. By way of comparison the 2010 based population projections forecast a total population for mid-year (June) 2011 of 1,811,021. The difference between this forecast and the actual 2011 Census population (May) is 158 (< 0.01%). 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 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 8,016 and an occupancy rate is calculated at 0.866 (rounded) to determine a total population for unconnected properties of 6,938. The total supplied population for all connected properties is calculated as 1,819.47 (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. The communal population for 2012/13 is 31,570 compared to 31,129 as used in AIR12. The farm population is 31,676 x 2.47 = 78,240. Therefore the non-household population is 109.81 (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 1,709.66 (x1000) (Line 13). The confidence grade for this line is a B2. This line remains the dominant figure within Section C of Table 7.

The population for non-household measured/unmeasured was derived from the percentage split between measured (not including farms) and unmeasured non-household properties and applied against the NHH communal population. The total farm population (78,240) has been classed as measured. The communal population (31,570) is split based on 10,896 unmeasured customers (22.5%) and 37,482 measured customers which excludes farms (77.5%). This therefore provides a population for measured NHH of 102.70 (x1000) (Line 16) and an unmeasured NHH population of 7.11 (x1000) (Line 15).

Line 17 is calculated by summing Line 13 + Line 14 + Line 15 + Line 16. This gives a figure of 1,819.47 (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.

Methodology Statement for AIR13

Table 7 -Water Properties & Population (Lines 1-12)

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 per embedded document. It is NIW policy to install meters on all New Connections.

Therefore, the number of new household connections for the year is 4154.

Households Connected	4154
Non-Households Connected	195
Total	4349

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 as per embedded document. It is NIW policy to install meters on all New Connections.

Therefore, the number of new non-household connections for the year is 195.

Households Connected	4154
Non-Households Connected	195
Total	4349

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 AIR13.

Households billed unmeasured water	End March 2012	End March 2013
Household - Unmeasured	654863	657667
Household - Measured – Not Charged (test meters)	934	397
Household - Measured	20714	26664
Household - Site Meters	459	490
Unmeasured – Not Charged	0	1
Total	676970	685219
Average	681095	

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 2012	End March 2013
	0	0
Average	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 2012	End March 2013
	0	0
Average	0	

Line 6: Households Billed Water

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

Calculated by adding AIR13 Table 7 lines 3, 4 and 5

Households Billed Water	Average 2012/2013
Households billed unmeasured water	681095
Households billed measured water (external meter)	0
Households billed measured water (not external meter)	0
Total	681095

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 AIR13 (dated 31st March 2013)

Household Properties (water supply area)	End March 2012	End March 2013
Unmeasured	692222	694060
Measured – Not Charged (Test)	944	402
Measured	24240	30400
Site Meters	548	579
Unmeasured – Not Charged	0	1
Total	717954	725442
Average	721698	

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 2012 and End March 2013 non-domestic unmeasured properties.

Non-households billed unmeasured water	End March 2012	End March 2013
	11267	10525
Average	10896	

There is a drop of circa 740 properties between the 2 year-end figures above. This is due to projects such as the Metering Programme and Data Cleanse/Upload. It is possible that this figure could include some duplicates due to data integrity issues and address matching.

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 2012 and End March 2013 non-domestic measured properties.

Non-households billed measured water	End March 2012	End March 2013
	68860	69456
Average	69158	

Site metered properties are a subset of the overall non-domestic billed measured water customer base, therefore not included in the figure above to avoid duplication. Where many customers are served through one site meter, only the landlord or business park management are considered as the customer, the other business are tenants.

Line 10: Non-Household Billed Water

This figure represents the average number of non-households billed for water within the supply area. This is calculated from the Rapid Property Summary for AIR13, excluding voids.

The sum of AIR13 Table 7 lines 8 & 9

Non-households billed water	Average 2012/2013
Non-households billed unmeasured water	10896
Non-households billed measured water	69158
Total	80054

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 2012	End March 2013
Unmeasured	19171	18265
Measured	73242	74253
Total	92413	92518
Average	92466	

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 2012	End March 2013
Non-Household - Unmeasured	7904	7740
Non-Household - Measured	4382	4797
Household - Unmeasured	37359	36393
Household - Measured	3526	3736
Household – Measured - Not Charged (Test)	10	5
Household – Site Meters	89	89
Total	53270	52760
Average	53015	

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	5	6	
			REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10	REPORTING YEAR 2010-11 CG	REPORTING YEAR 2011-12 CG	REPORTING YEAR 2012-13 CG	
A HOUSEHOLD METER INSTALLATION									
1	Selective meters - installed	nr	0	0	3,945	4,427 B2	3,458 B2	3,078 B3	
2	Meter optants installed	nr	0	0	0	0 A1	0 A1	0 A1	
3	Meters installed - external meter with existing or new boundary box	nr	0	11,401	3,945	4,427 B2	3,458 B2	3,078 B3	
4	Meters installed - external meter without boundary box	nr	3,723	0	0	0 A1	0 A1	0 A1	
5	Meters installed - internal meter	nr	0	0	0	0 A1	0 A1	0 A1	
6	No. of meter installation requests outstanding for greater than three months	nr	0	0	0	0 A1	0 A1	0 A1	
B NON HOUSEHOLD METER INSTALLATION									
7	Selective meters - installed	nr			907	1,071 B2	747 B2	692 B2	
7a	Number of non household meters renewed	nr			779	5,814 B2	8,722 B2	4,653 B2	
8	Meter optants installed	nr			26	40 B2	67 B2	45 B2	
9	Meters installed - external meter with existing or new boundary box	nr			375	779 B2	578 B2	638 B2	
10	Meters installed - external meter without boundary box	nr			71	28 B2	35 B2	17 B2	
11	Meters installed - internal meter	nr			228	304 B2	201 B2	82 B2	
12	No. of meter installation requests outstanding for greater than three months	nr			20	27 B3	23 B2	10 B2	
C WATER DEMAND AT RECENTLY METERED NON-HOUSEHOLD PROPERTIES									
13	Average water billed - selective metered properties	l/prop/d	2	N/C	N/C	442.28	223.78 B3	625.61 B3	363.53 B3

Table 8 – Non Financial Measures – Water Metering

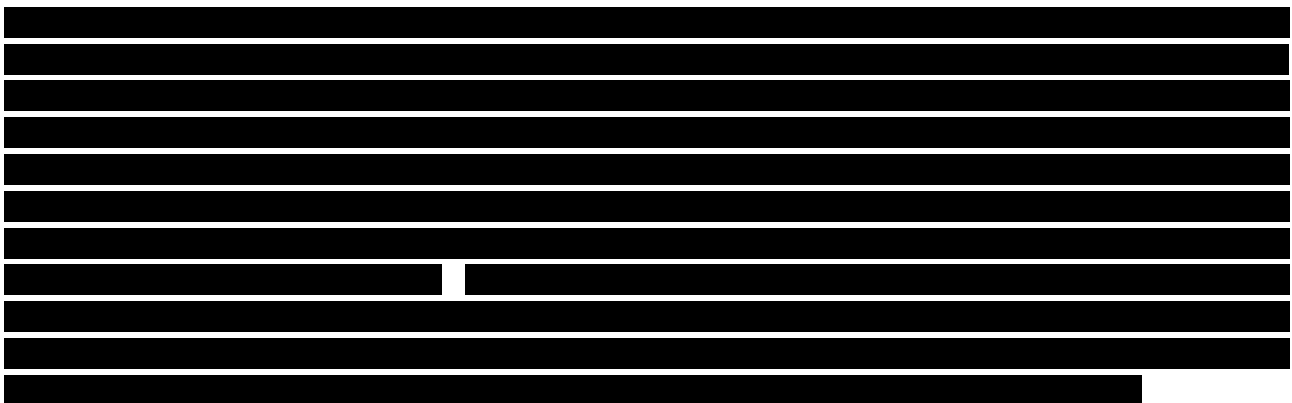
Water Metering Activities

Household Meter Installation (Lines 1-6)

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 zeros in lines 2, 4, 5 and 6 of section A table 8. Information is however provided in lines 1 and 3.

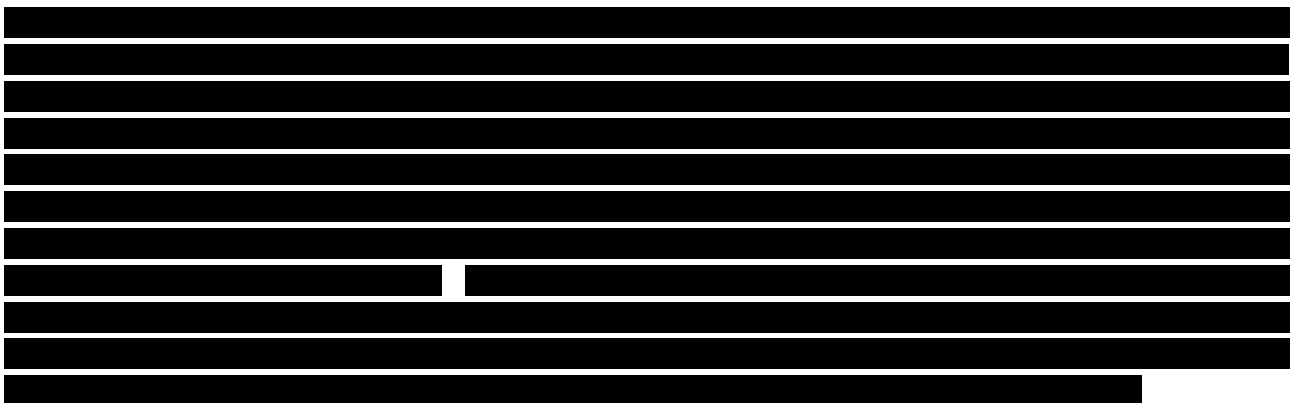
Line - 1 Selective Meters Installed

All newly connected domestic properties are selectively metered in accordance with Article 81 of the 2006 Order. A total of 3078 water meters were installed at new domestic properties during the reporting period.

A table with 10 rows and 2 columns, completely redacted with black bars.

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 3078 water meters were installed in existing boundary boxes at new domestic properties during the reporting period.

A table with 10 rows and 2 columns, completely redacted with black bars.

Non Household Meter Installation (Lines 7-12)

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 1000 unmeasured customers to measured status per reporting year. In year the NIW metering contractor carried out 3731 premises surveys which resulted in 454 meter installs. The remainder were not deemed suitable for metering at the time of the survey due to a number of reasons including, but not limited to, being on shared supplies (943), changed to domestic (186), vacant (271), engineering difficulties (82) or already metered (546). The company has also chosen to meter a number of properties deemed to be large water users. The total selective meter installs for the year was 692 which includes 454 UNHH properties changed from unmeasured to measured status. The additional 238 selective meters installations was as a result of the metering of 17 large and 168 small diameter non-domestic connections and 53 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 1239 meters through the MMR process. As this is a reactive process the number of requested jobs can vary year to year and in response to increasing DG targets. In the first half of the reporting year a substantial number of jobs were requested draining the allocated budget down faster than expected. As a result of this business rules were introduced to limit reactive meter jobs to only those meters that couldn't be read to allow for the production of a customer bill. The number of reactive meter replacement jobs was significantly higher in the previous year due to a concerted effort to meet the DG8 target for the first time. To this end it is anticipated the number of requested jobs may increase in the 2013/14 reporting year given the DG8 target is to be increased in 2014/14.

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 1407 meters under the PME programme.

An additional 1012 meters were replaced through an Engineering and Procurement contract for water mains rehabilitation as well as 995 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 4653 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 45.

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 638.

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 17 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 82.

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 10.

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 737 installations. This total is 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 82 internal and 655 external installations.

Line 13 – Average Water Billed - Selective Metered Properties

The methodology for this line has changed since AIR12 in terms of base data. Base data has been extracted from Rapid using Corvu, instead of 'off line' spreadsheets.

As with AIR12, the meters which were uploaded to Rapid during the previous reporting year (2011/12 for AIR13, 2010/11 for AIR12) were the focus for this line, rather than meters uploaded during the 2012/13 year (2011/12 for AIR12). The meter installation date does not always reflect the date of upload; therefore meters wouldn't have completed their 1st year of measured charging in the same year they were installed.

The consumption is based on the usage throughout the 2012/13 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 **363.53 l/prop/day**. Using the revised methodology the figure for AIR12 was rerun and calculated as 363.53 l/prop/day.

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		5		6	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG	2012-13	CG
A WATER TREATMENT AND DISTRIBUTION														
1 Distribution input affected by Article 31 undertakings (or ADs)	MI/d	3	236.311	A2	247.256	A2	8.319	A2	0.000	A1	0.000	A1	0.000	A1
2 Distribution input affected by new Article 31 (or ADs) since start of report year.	MI/d	3	9.862	A2	0.000	A1	0.000	A1	0.000	A1	0.000	A1	0.000	A1
3 Percentage distribution input not affected by Article 31s (or ADs)	%	3	61.924	A2	60.633	A2	98.665	A2	100.000	A1	100.000	A1	100.000	A1
4 Percentage properties in WSZs affected by Article 31s in distribution	%	3	38.020	A2	37.445	A2	2.068	A2	0.000	A1	0.000	A1	0.000	A1
5 Percentage properties in WSZs affected by new Article 31s in distribution	%	3	1.402	A2	0.000	A1	0.000	A1	0.000	A1	0.000	A1	0.000	A1
B DISTRIBUTION INPUT COVERED BY WORK PROGRAMMES AGREED WITH DWI														
6 Raw water deterioration	MI/d	3	42.457	A2	11.831	A2	0.000	A1	0.000	A1	0.000	A1	23.100	A2
7 Conditioning water supplies to reduce plumbosolvency	MI/d	3	606.817	A2	614.605	A2	617.029	A2	623.693	A2	601.801	A2	563.648	A2
8 Reducing the risk from Cryptosporidium	MI/d	3	617.772	A2	0.000	A1	0.000	A1	0.000	A1	0.000	A1	0.000	A1
9 Other	MI/d	3	0.000	A2	0.000	A1	0.000	A1	48.202	A2	26.802	A2	22.952	A2

Table 9 – Water Quality

Background – Year on Year

The perceived quality of water supplied by NI Water to customers has plateaued between 2010 and 2012:

- Mean Zonal Compliance has decreased slightly from 99.82% in 2010 to 99.83% in 2011 and 99.80% in 2012. (Figure assessed by NI Water - waiting for confirmation from DWI).
 - The small decrease in water quality is due in part to considerably more iron exceedances in 2012 (47) compared to 2011 (30).
 - In addition to this increase in iron exceedances, there was a much higher than expected number of individual pesticide exceedances – mainly for MCPA, but also single exceedances of Metoxuron and Linuron. These increased from 2 pesticide exceedances in 2011 to 13 in 2012.
- The Operational Performance Index (for NI Water based on turbidity, iron and manganese as agreed with DWI) decreased from 99.31% in 2011 to 98.96% in 2012 (NIW assessment on Turbidity, Iron and Manganese). As indicated above, this was largely due to the increased numbers of iron exceedances.
- The percentage compliance measured at Water Treatment Works (WTWs) decreased slightly from 100.00% in 2011 to 99.98% in 2012.
- The percentage compliance measured at Service Reservoir (SR) decreased from 99.92% in 2011 to 99.90% in 2012. This decrease has been compared against other UK water utilities who have also reported a similar compliance reduction at service reservoir.
- Overall out of 214,017 measurements (directive standards, national standards, indicator parameters and additional monitoring requirements) made at customer tap, WTWs, SRs and Authorised Supply Points, 99.87% 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. This continued for 2012, with a further zone being removed as its supplying borewell was removed from service.

Line 1 – Distribution input affected by Article 31 undertakings (or ADS)

The data used for the estimation of average flow at WTWs in Table 9 lines 1-3 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.

Article 31 Undertakings or Authorised Departures

- Article 31 Undertakings – NI Water did not use Article 31 Undertakings during 2012.
- Authorised Departures – NI Water had no authorised departures in place during 2012.

The entry for Line 1 is therefore 0 MI/d.

Line 2 – Distribution input affected by new Article 31 undertakings (or ADs) since start of report year

During 2012 there were no new Article 31 undertakings or Authorised Departures in place for NI Water. The entry in Line 2 is therefore 0 MI/d.

Line 3 – Percentage distribution input not affected by Article 31s (or ADs)

There were no Article 31s or ADs in place during 2012. The entry in Line 3 is therefore 100%.

Line 4 – Percentage properties in WSZs affected by Article 31s in distribution

There were no Article 31s or ADs in place during 2012. The entry in Line 4 is therefore 0%.

Line 5 – Percentage properties in WSZs affected by new Article 31s in distribution

As referred in line 2 above, during 2012 there were no new Article 31 undertakings or Authorised Departures put in place for NI Water. The entry in Line 5 is therefore 0%.

Line 6 – Raw water deterioration

Following MCPA exceedances at Altmore WTW and MCPP exceedances at Lough Braden WTW, legal instruments in the form of Authorised Departures were put in place at these sites under the agreement of DWI. These ADs expired prior to 2012 and are not included in the calculations.

Following MCPA exceedances in 2006/2007, Dorisland and Camlough WTWs had PAC installed and had increased monitoring of this parameter but no Authorised Departures in place. During 2010/2011/2012 further exceedances of MCPA were detected at Killyhevlin, Derg, Ballinrees, Belleek, Clay Lake, Seagahan and Carran Hill WTWs. A programme of enhanced monitoring for MCPA has been setup for these sites.

Site Code	Site Name	MI/d Raw Water Deterioration	Comment
W1701P	Ballinrees PPP	26.68	Enhanced sampling programme
W2509	Clay Lake	3.74	Enhanced sampling programme
W2514	Seagahan	9.56	Enhanced sampling programme
W2706	Camlough	3.67	PAC for Pesticide removal
W2802	Carran Hill	5.97	Enhanced sampling programme
W4501	Derg	14.59	Enhanced sampling programme
W4701	Killyhevlin	23.77	Enhanced sampling programme
W4722	Belleek	1.69	Enhanced sampling programme
	Total	89.65	

DWI is content with the above methodologies and again 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 (CPEO) and Provisional Enforcement Orders (CPO), are now the method that NIW is regulated by DWI.

During 2012 one CPEO for Dorisland WTW (CPEO/12/01) 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 23.10 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 2012 were reduced with most however remaining at the same levels.

LIMS Code	Water Treatment Works	Average Dosed Water (ML/d)
W1301P	Moyola PPP	14.37
W1302	Lough Fea	11.28
W1303	Dungonnell	6.73
W1501	Killylane	11.79
W1701P	Ballinrees PPP	26.68
W1702	Altnahinch	8.31
W2308P	Castor Bay PPP	79.68
W2509	Clay Lake	3.74
W2514	Seagahan	9.56
W2706	Camlough	3.67
W2801	Fofanny	36.51
W2802	Carran Hill	5.97
W3301P	Dunore Point PPP	104.07
W3315P	Forked Bridge PPP	19.75
W3317	Dorisland	23.10
W3801	Drumaroad	102.55
W4301	Carmony	19.06
W4306	Caugh Hill	15.88
W4501	Derg	14.59
W4513	Lough Bradan	7.07
W4523	Lough Macrory	9.81
W4541	Glenhordial	4.03
W4701	Killyhevlin	23.77
W4722	Belleek	1.69
	Total	563.65

Line 8 – Reducing the risk from Cryptosporidium

DWI approved Cryptosporidium risk assessments were previously carried out on all sources annually and showed effective barriers existed at all NI Water's treatment works. These risk assessments are now incorporated into annual revisions of the

treatment works and supply systems Drinking Water Safety Plans (DWSP) which are submitted to DWI under regulation 26. Under the current guidance, which requires that this should be assessed against sites with “legally binding instruments”, NI Water has no sites which fall into this category. The return for this line is therefore 0 ML/d.

Line 9 – Other

There were no other Distribution Inputs affected by other legal requirements not mentioned in lines 6 – 8. However, NIW had 1 current CPEO at a WTW issued in 2011 which was closed before the end of 2012. A further 3 CPEOs were issued and in force as at 31/12/2012.

CPEOs are regarded as legal instruments under Northern Ireland legislation, and require NIW to carry out certain undertakings to achieve a DWI specified aim. Details of these CPEOs are contained in the appendix to this commentary.

Site Code	Supply Source	CPEOs in force at 31/12/12 (ML/d)
W4306	Caugh Hill	15.88
W4513	Lough Bradan	7.07
	Total	22.95

Confidence Grades

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

Appendix - Line 9

CPEO	Issue Date	Location	Parameter	Date Closed
CPEO/11/02	28/10/2011	Killyhevlin Water Treatment Works & Killyhevlin Enniskillen ZN0802	Contravention of Regulatory Standard for Taste and Odour Parameters (Acceptable to consumers and no abnormal change)	04/12/2012

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)	ongoing
CPEO/12/02	18/07/2012	Caugh Hill WTW	Contravention of Regulatory Standard for aluminium, iron, hydrogen ion (pH), Trihalomethanes (THMs), and turbidity parameters	ongoing
CPEO/12/03	18/12/2012	Lough Bradan WTW and Supply Area	Contravention of Regulatory Standard for Trihalomethanes (THMs)	ongoing

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 10 NON FINANCIAL MEASURES

WATER DELIVERED (TOTAL)

DESCRIPTION	UNITS	DP	1		2		3		4		5		6		7
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		CURRENT YEAR
			2007-08	CG	2008-09	CG	2009-10	CG	2010-2011	CG	2011-12	CG	2012-13	CG	2012-13
A WATER DELIVERED - VOLUMES															
1 Billed measured household	MI/d	2	14.76		0.00		0.00		0.00		0.00		0.00		0.00
2 Billed measured non-household	MI/d	2	124.68		134.05		127.02		134.71		129.67		121.44		
3 Billed measured	MI/d	2	139.44		134.05		127.02		134.71		129.67		121.44		
4 Billed unmeasured household	MI/d	2	306.61		311.07		310.06		318.04		301.44		297.41		298.31
5 Billed unmeasured non-household	MI/d	2	24.48		20.80		11.38		9.04		7.29		6.87		
6 Billed unmeasured	MI/d	2	331.09		331.87		321.44		327.08		308.73		304.28		
B WATER DELIVERED - COMPONENTS															
7 Estimated water delivered per unmeasured non-household	l/prop/d	2	803.30	B4	784.61	B4	665.60	B4	662.37	C4	610.40	C4	630.51	C4	
7a Estimated water delivered per unmeasured household	l/prop/d	2	443.29	B4	481.59	B3	470.49	B3	479.44	B3	448.03	B3	436.66	B3	
8 Per capita consumption (unmeas'd h'hold - excl s/pipe leakage)	l/h/d	2	145.18	B3	158.97	B3	158.41	B3	164.19	B3	152.90	B3	149.98	B3	
9 Per capita consumption (meas'd h'hold - excl s/pipe leakage)	l/h/d	2	158.34		0.00		0.00		0.00		0.00		0.00		
10 Underground supply pipe leakage (unmeas'd households)	l/prop/d	2	63.58		65.97		62.02		62.03		62.03		60.2		
11 Underground supply pipe leakage (ext. metered households)	l/prop/d	2	0.00		32.98		31.01		31.01		31.01		30.1		
12 Underground supply pipe leakage (other metered h'holds)	l/prop/d	2	0.00		0.00		62.02		62.03		62.03		60.2		
13 Underground supply pipe leakage (void properties)	l/prop/d	2	63.58		65.97		62.02		62.03		62.03		60.2		
14 Meter under-registration (measured households)	MI/d	2	0.53		0.00		0.00		0.00		0.00		0.00		
15 Meter under-registration (measured non-households)	MI/d	2	5.53		9.84		9.62		10.18		9.87		9.29		
16 Distribution system operational use	MI/d	2	4.97		4.72		4.80		4.66		2.97		2.36		
17 Water taken legally unbilled	MI/d	2	25.09		29.37		25.89		21.96		19.44		14.79		
18 Water taken illegally unbilled	MI/d	2	2.48		1.21		3.54		6.08		1.08		0.51		
19 Water taken unbilled	MI/d	2	27.57		30.58		29.43		28.04		20.52		15.30		
20 Water delivered (potable)	MI/d	2	498.10		496.50		477.89		489.83		458.92		441.02		
21 Water delivered (non-potable)	MI/d	2	0.00		0.0		0.00		0.00		0.00		0.00		
22 Water delivered (non-standard rates: potable)	MI/d	2	4.20		13.90		0.00		0.00		0.00		0.00		
23 Water delivered (non-standard rates: non-potable)	MI/d	2	0.00		0.00		0.00		0.00		0.00		0.00		
24 Distribution losses	MI/d	2	111.38		131.49		140.55		130.66		122.02		115.44		
25 Total leakage	MI/d	2	156.52	B3	180.93	B4	186.86	B4	176.97	B4	168.32	B4	161.75	B4	
26 Distribution input	MI/d	2	614.45	B2	632.71	B2	623.24	B2	625.15	B2	583.91	B2	558.82	B2	
27 Bulk supply imports	MI/d	2	0.00		0.00		0.00		0.00		0.00		0.00		
28 Bulk supply exports	MI/d	2	0.22		0.34		0.34		0.52		0.81		0.85		
29 Water treated at own works to own customers	MI/d	2	614.45		632.37		622.90		624.63		583.10		557.97		
30 Overall water balance	cg			B2		B3		B2		B2		B2		B2	
C SECURITY OF SUPPLY															
31 Security of supply index - company's planned levels of service	nr	0	-26		42		88		97		100		100		
32 Security of supply index - reference levels of service	nr	0	-26		42		88		97		100		100		

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) Annual Information Return Reporting Requirements and Definitions Manual 2013. 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 reported leakage for 2012/13 figure demonstrates the sustained progress that has been made throughout the PC10 period following the implementation of the Water Balance Action plan. The reported leakage figure of 161.75 MI/d is 6.25 MI/d below the 2012/13 annual target of 168 MI/d and is approximately 25 MI/d below the entry figure of 186.86 MI/d at the commencement of PC10.

Distribution Input

There has been a noted reduction in the distribution input of 25.68 MI/d pre MLE from a value of 585.09 MI/d in AIR12 to 559.41 MI/d in AIR13. Overall this is reflected in a reduction in some of the major post MLE water balance components. In particular significant reductions of measured non-household 8 MI/d, unmeasured household 4 MI/d, water taken unbilled 5.2 MI/d and leakage 6.5 MI/d have been recorded.

The graph in Fig 1 below highlights the notable reduction in distribution input across the PC10 period.

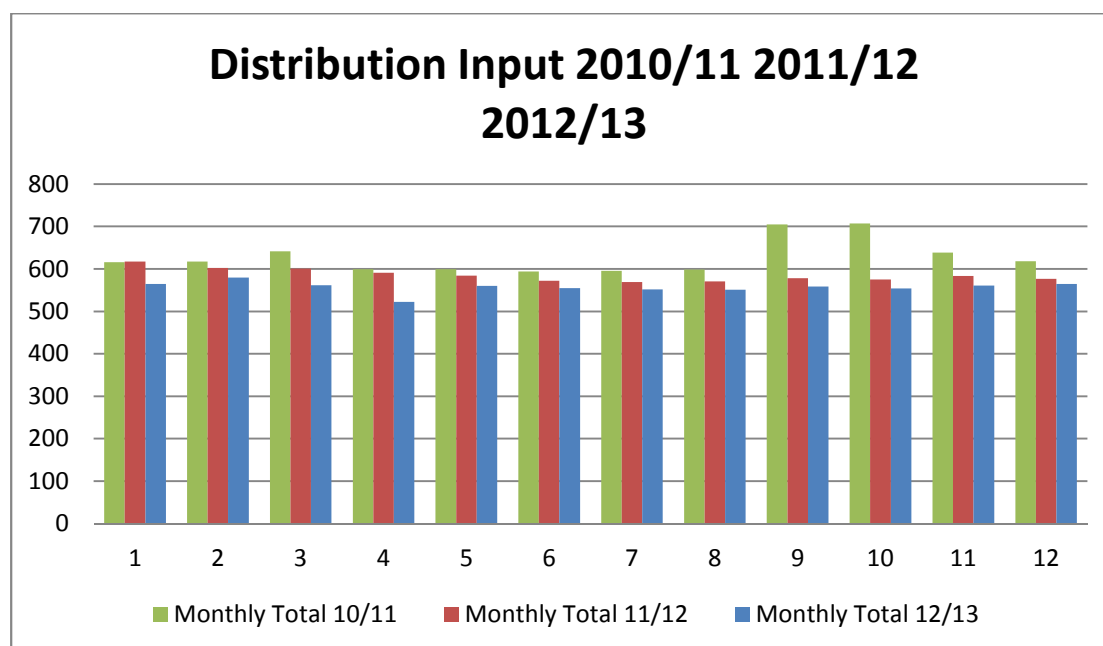


Fig 1

There are a number of factors that have influenced this reduction

- Unmeasured Household usage
- Measured Non-Household
- Leakage Capital Investment

Unmeasured Household Usage and Measured Non-Household

Similar in nature to the “Don’t Wait Insulate” campaign of 2011/12, NI Water pursued a media campaign based on the message, “Winterproof your Home” during the

winter of 2012/13. 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 and properties within the sites are as accurate as possible. During A1R13 a total of 962 properties were visited which equates to 19.99% of the PCC monitoring stock. Alongside this, 10 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 in AIR13 in comparison to 152.82 l/head/d for AIR12. This translates to a reduction of 0.73%.

The weather of 2012/13 resulted in a cold spring, followed by a cool, wet summer and the latter part of the year was relatively mild and wet until the significant snowfalls in late March. In the spring/summer especially the above average rainfall, below average sunshine and below average temperatures was likely to impact on customer demand. This is substantiated by the graphs below in Fig 2 and 3 which give an indication of both the increase in rainfall and decrease in sunshine hours respectively during 2102/13 in comparison to the previous PC10 years.

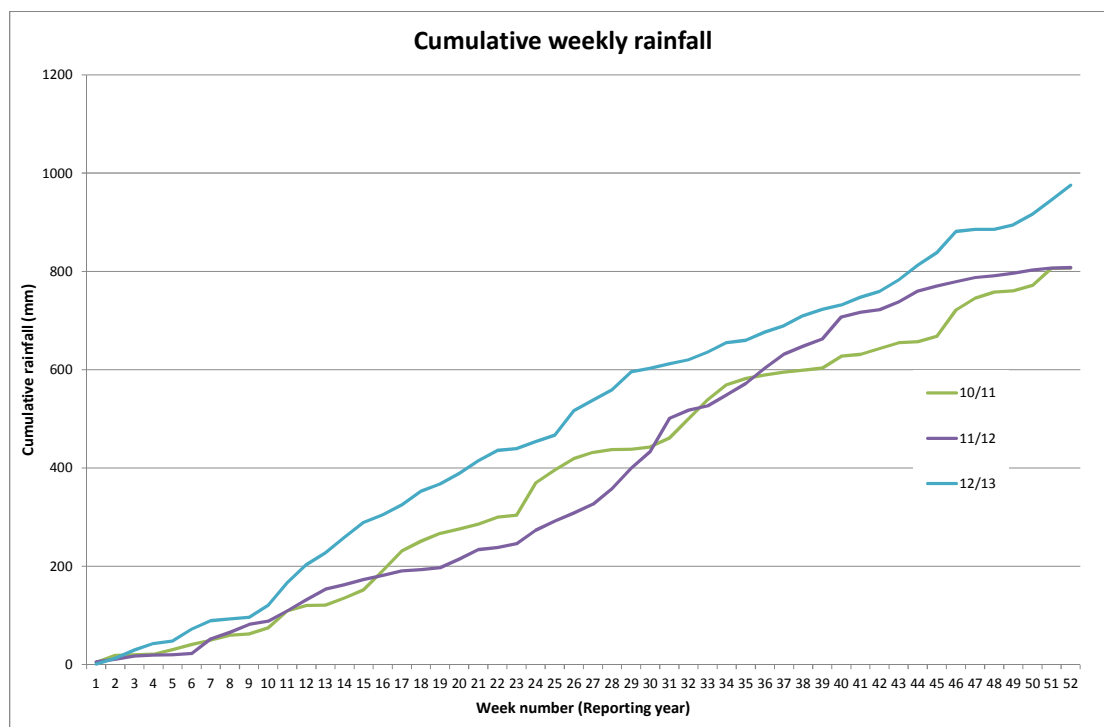


Fig 2

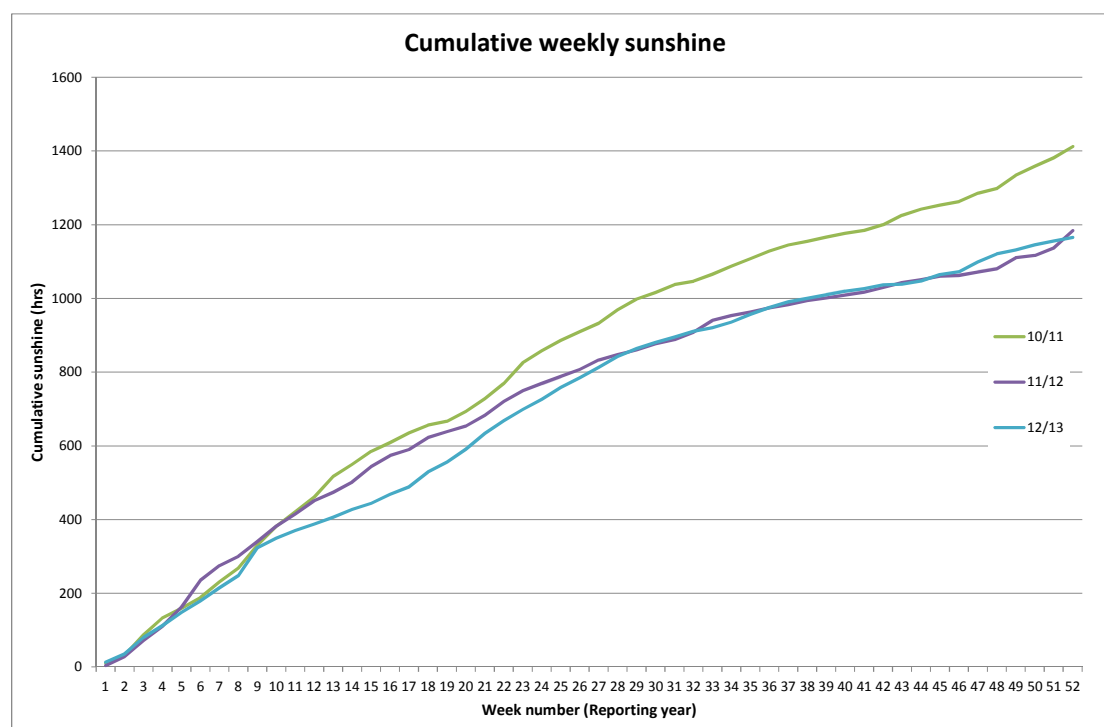


Fig 3

This weather pattern has undoubtedly had an impact on both household and non-household consumption. The net effect is a reduction on measured consumption from 129.64 MI/d in AIR12 to 121.44 MI/d in AIR13 which corresponds to 8.20 MI/d.

Leakage Capital Investment

The PC10 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 28 sites were upgraded during the year and at present 85% of all DMA sites are now monitored directly through telemetry. This has increased data availability and quality to enhance leakage monitoring, targeting and reporting as well as being available during major incidents.

During 2012/13 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 2012/13 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.

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 AIR13 of 1.29%. 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 166.59 MI/d for total leakage and the Minimum Night Flow Method has provided a figure of 159.38 MI/d. When the resulting imbalance between the two methods of 7.21 MI/d is compared to the Distribution Input figure of 559.41 MI/d (pre-MLE), it provides a percentage discrepancy of 1.29 %. 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 161.75 MI/d.

Data Quality

The focus has remained on data quality throughout the final year of the PC10 period. This has been achieved primarily via projects directly related to the continuation of the capital investment programme as per our PC10 Leakage Business Plan. Alongside this it has been necessary to plan ahead for the phased implementation of Netbase to coincide with its adoption as the official leakage management software commencing April 2013. NI Water have previously outlined that there would be a material difference between TDMS and Netbase.

In order to fully understand the magnitude of this difference it was essential that measures were in place to ensure that Netbase was configured to reflect NI Water's network. As a result of this exercise NI Water increased the operability levels of DMAs from 70% to 84% and already this compares favourably with company figures in England and Wales using similar leakage calculation software. Simultaneously a comprehensive review of significant non-household night users was undertaken to ensure that the associated data was presented in the correct format to populate our forthcoming reporting leakage software, Netbase.

In previous AIR commentaries NI Water had indicated that there would be a difference between the estimated leakage, as calculated by TDMS and Netbase primarily due to the difference in methodologies. Initial work had indicated that this difference could be in the order of 10 to 30 MI/d in Bottom Up leakage. This was reviewed in 2012/13 by NI Water and an audit undertaken by the Reporter in November 2012. At the end of the year the company can report that the estimated difference in Bottom Up leakage in the two methods is 12 MI/d which results in a post MLE difference of around 8.14 MI/d. This is within the range of 8 – 10 MI/d as identified by both the Reporter in November 2012 and the 8 MI/d as noted by the Utility Regulator in the PC13 Final Determination.

For clarity the post MLE figure for TDMS is 161.75 MI/d with an imbalance of 1.29%. The equivalent estimated post MLE figure for AIR13 using Netbase is 169.89 MI/d which presents an imbalance of -0.93%. This is a like for like comparison with all other parameters remaining constant. When the error estimate for bottom up leakage is reduced from 15% to 10% the post MLE figure, with Netbase, is 170.73 MI/d. The lower error estimate of 10% would reflect that Netbase leakage management software adopts best practice. It is the intention of NI Water to adopt an error estimate of 10% throughout the PC13 period which is consistent with the Reporter's AIR12 recommendation.

NI Water has continued to develop a company specific assessment for both trunk main and service reservoir leakage. This is consistent with the recommendations of

the Reporter and Utility Regulator. To date approximately 76% of trunk main balances have been conducted and work is on-going to review the remaining meter and connectivity issues. Once complete this exercise will make a useful contribution towards developing company specific assessments for trunk main and service reservoir and hence continue to improve the Bottom Up leakage calculation. In addition it is likely to assist with a further improvement in the imbalance between Top Down and Bottom Up leakage. This would conclude the sound progress in the accuracy of many key variables that has been made during PC10.

This initiative is supported via a continuous meter calibration programme. This ensures accuracy of flow data particularly in relation to distribution input meters as well as inter-zonal meters, flow monitoring zones and DMA meters. This has played a vital role in both resolving and providing reassurance of DMA leakage as well as the on-going resolution of trunk main leakage calculations.

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 decreased from 129.64 MI/d in AIR12 to 121.44 MI/d in AIR13.

For AIR13, NI Water has used 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 0.95 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 AIR12.

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 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 AIR13 is 297.41 Ml/d. This figure represents a decrease of 3.90 Ml/d from the AIR12 value of 301.31 Ml/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) 2010. 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 2012/13 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 throughout the PC10 period.

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 962 properties to determine more up to date information on property types, numbers of vacant properties and ultimately occupancy rates. The data from the 2012/13 survey has been input into the AIR13 consumption monitor assessment. The overall occupancy rate is 2.45 for AIR13 compared to an occupancy rate for AIR12 of 2.42. The NISRA occupancy rate for Northern Ireland is 2.47 for 2012/13.
- As per AIR10, AIR11 and AIR12 a figure of 1.5% has been applied to allow for the 'Hawthorne Effect'.
- 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 AIR13 is 6.87 MI/d. The value reported in AIR12 was 7.56 MI/d. NI Water has continued with a programme of meter installation of unmeasured non-household properties. This has resulted in the reduction in the number of unmeasured non-household properties from 11,943 in AIR12 to 10,896 in AIR13.

The assessed unmeasured non-household figure for AIR13 is 198.01 m³/prop/yr, which is an increase compared to a figure of 191.21 m³/prop/yr for AIR12. 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 AIR13.

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 AIR13 is 630.51 l/prop/d. The figure reported for AIR12 was 633.01 l/prop/d.

The allowance for unmeasured non-household properties for AIR13 is 198.01 m³/prop/yr. The calculated figure for AIR12 was 191.21 m³/prop/yr.

Line 7a – Estimated Water Delivered Per Unmeasured Household

The post MLE figure for estimated water delivered per unmeasured household for AIR13 is 436.66 l/prop/d. The figure reported for AIR12 was 447.83 l/prop/d. The methodology adopted for AIR13 is consistent NIAUR's AIR13 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 AIR13 is 149.98 l/hd/d. The figure reported for AIR12 was 152.82 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 136.38 l/hd/d. This assessment is based on 12 months consumption data from 1 April 2012 to 31 March 2013. This compares to a pre MLE figure of 137.38 l/hd/d for AIR12.

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, 962 properties have been surveyed in 2012/13 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 AIR13 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 not been updated and remains as per AIR11 and 12.

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'. Supply Pipe Leakage for NI Water has remained constant throughout the PC10 period and therefore remains at 46.31 MI/d. The AIR13 unit values are 60.20 l/prop/d for unmeasured, other households and void properties, with a value of 30.10 l/prop/d being calculated for externally measured non-households.

The initial AIR11 unit values were 62.02 & 31.01 l/prop/d respectively and these have been assessed downwards as the number of properties, household and non-household, have increased annually. This reassessment maintains a consistent NI Water SPL value of 46.31 MI/d.

It has previously been demonstrated that properties in Northern Ireland have much longer lengths of supply pipes, at twice the average length, when compared to England and Wales. The total value of 46.31 MI/d is approximately 28.6% of total leakage. This figure is comparable to those reported by water companies in England and Wales.

Work previously undertaken for AIR10, 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 Supply Pipe Leakage Assessment Report for 2009/10 (carried out by Crowder Consulting). Supply Pipe Leakage remains as per AIR11 at 46.31 MI/d as agreed with the Utility Regulator in keeping consistency.

Lines 14 to 15 – Meter Under-Registration

The company specific MUR figures provided by WRC for AIR10 have again been adopted for AIR13. 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 AIR13 is 2.36 MI/d. The value reported for AIR12 was 2.97 MI/d.

The methodology adopted has again been used for AIR13. This included a review of the components that make up DSOU, such as service reservoir cleaning; mains renewal; repair flushing; water and chlorine sampling. The main adjustment is in the calculation of building water. Previously this was based on the population multiplied by a set figure of 0.83 l/head/day. It is believed that a more appropriate calculation should be based on a recognised alternative of the product of the number of new properties connected times a set value of 80m³ per property. This amendment results in a reduction of approximately 0.46 MI/d. (Ref. Managing Leakage Report D, Appendix F) Further minor refinements have occurred in relation to the DSOU estimate and as such the estimated figure has reduced by 0.61 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 has decreased from 20.52 MI/d in AIR12 to 15.30 MI/d in AIR13. This decrease in AIR13 is partially due to the re-evaluation of council usage. Last year this was based on company estimates. This year the company have aligned to Managing Leakage Report D, Appendix F which applies 0.25 l/hd/d. The adjustment to this component has resulted in a reduction of 0.4 MI/d. In addition there has been a reduction in non-household Test meter consumption which has reduced by approximately 2 MI/d. The largest amendment is due to a review of DRD supplies. Once again occupied void consumption is now included under billed non-household as these have been confirmed as properties which have become void during AIR13.

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 0.99 MI/d, including MUR, pre MLE.
- As per AIR12 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 AIR12.
- Unmetered SPS consumptions have been assessed on the average consumption of metered SPSs and is consistent with AIR12.

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 AIR13 are estimated to be 115.44 MI/d. This is a decrease on the AIR12 figure of 121.93 MI/d.

Line 25 – Total Leakage

Total leakage is the sum of distribution losses and underground supply pipe leakage. The reported figure for total leakage for AIR13 is 161.75 MI/d. The reported figure for AIR12 was 168.23MI/d.

Total leakage is also calculated using an MNF methodology. For AIR13 the reported pre MLE MNF method leakage is 159.38 MI/d. The figure reported for AIR12 was 163.74 MI/d.

NI Water has an extensive DMA network (approx. 1070 DMAs) covering 99% of all properties in Northern Ireland. Approximately 85% 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 providing in the main, once a day download.

As mentioned in previous AIR commentaries NI Water have continued to utilise an in-house Telemetry Database Management System (TDMS) application to interface with the telemetry and logged data and its subsequent processing to produce DMA minimum night flow values throughout the PC10 period. Previously it was documented that Netbase would be introduced on NI Water's estate to mitigate the restrictions of the current system and coincide with leakage best practice. In keeping with this Netbase went 'live' on 1st April 13 and is now the Leakage Management Software.

Initially it was anticipated that there would be an estimated difference in estimated reported Bottom Up leakage between Netbase and TDMS of the order of 10 to 30 MI/d. At year end this is estimated to be in the order of 12 MI/d. The actual post MLE difference is 8.14 MI/d. This is within the range of 8-10 MI/d as identified by the Reporter in his audit in November 2012 and is consistent with the figure in the PC13 Final Determination of 'around 8 MI/day'. It should be noted that applying an error estimate of 10%, rather than the current 15%, increases the reported leakage by some 0.84 MI/d.

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. Similarly for non-household properties the figure used for AIR13 is 8 l/prop/hr which is constant with AIR12. The non-household night use figure is from the WRc Managing Leakage Suite of Reports.

As stated previously a non-household night use model was developed enabling NI Water to attribute company specific figures to the various categories of customer. The non-household night use assessment is embedded in the implementation of the new leakage management software, Netbase. In addition, following the work that was undertaken as part of the Netbase implementation project, the night use assessment for non-households was updated on both Netbase and TDMS as they were validated. As of 1st April Netbase Leakage Management Software has become the official means of producing Bottom Up leakage calculations and this information is fundamental to the leakage calculation.

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. This has remained constant at 46.31 MI/d.

NI Water has calculated Total Leakage by adding Distribution Losses (Line 24) to a total SPL figure of 46.31 MI/d. SPL has been maintained at a constant value for AIR13 as agreed with NIAUR for the purpose of creating stability for the reporting of company leakage and targeting.

Similarly, as agreed with NIAUR for the inclusion of stable data, NI Water's Hour day Factor, service reservoir leakage and trunk main leakage remain constant.

The company specific hour to day factor for AIR13 remains at 22.8 following the extensive pressure logging programme across the network and the subsequent assessment that was provided by Crowder Consulting.

The leakage assessments for each resource zone are summed and added to Service Reservoir (SR) & Trunk Main (TM) leakage assessments to give a company leakage level. The AIR13 service reservoir and trunk main leakage assessments are the same as those within AIR12. Service reservoir leakage estimated as 4.53 MI/d and trunk mains leakage estimated as 13.66 MI/d.

However NI Water has been developing a tile analysis process to facilitate the calculation of a company specific SR and TM assessment. This activity will continue in 2013/14 in order to ensure that company specific values will be in place for AIR14. As per AIR11 and AIR12 a 15% confidence has been used for the MNF Method Leakage in the MLE calculations. However this may be subject to review following the implementation of Netbase and the accompanying assessment of the difference between Netbase and TDMS packages.

Line 26 – Distribution Input

The distribution input figure for AIR13 has been calculated as a post MLE figure of 558.82 MI/d. The distribution figure for AIR12 was 583.93 ML/d. The company specific confidence interval for distribution input for AIR13 is 2.1%. This is the same as AIR12.

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 constant in that it is based on a definitive number of input meters. However this task was transferred across from TDMS to Netbase following a two month trial to monitor the accuracy of the new report. In order to do this the daily figures from both Netbase and TDMS were compared. This parallel run indicated that over the period of the review Netbase recorded an average DI figure 0.64 MI/day greater than the TDMS methodology. This is the equivalent to an increase of 0.11%. 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	27.06	27.03
Castor Bay	98.66	98.55
Dunore Point	97.07	96.97
Moyola	14.42	14.40
Total	237.21	236.96

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 71 small exports to the Republic of Ireland. These exports are predominately individually metered customers and these meters are read and billed through RAPID in a category known as cross border supplies. This figure is included in the metered non-household consumption category.

The post MLE volume amounts to 0.85 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 71 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 558.82 MI/d and deducting the cross border exports the volume of water treated at own works to own customers is 557.97 MI/d.

Overall Water Balance

AIR13 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	120.83	10%	146.00	8.4%	0.61	121.44
Billed Unmeasured HH	293.83	10%	863.38	49.7%	3.58	297.41
Billed Unmeasured NHH	6.86	15%	1.06	0.1%	0.00	6.87
SPL	46.31					46.31
DSOU	2.36	25%	0.35	0.0%	0.00	2.36
Water Taken Unbilled	15.24	25%	14.51	0.8%	0.06	15.30
Sum of components	552.20					558.82
Distribution Input	559.41	2%	141.98	8.2%	0.59	558.82
Top Down Leakage	166.59					
BU Leakage	159.38	15%	571.56	32.9%	2.37	161.75
Imbalance (mld)	7.21			100.0%		
% Imbalance	1.29%					443.38

Table 1 Water Balance Table

The Water Balance produces an overall imbalance of 7.21 MI/d, 1.29%. The imbalance reported for AIR12 was 13.56 MI/d, 2.32%.

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 2013, the confidence grade applied to the NI Water's water balance is B2. The confidence level for the overall water balance for AIR12 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 several years ago and the current confidence grading for the water balance are shown in Table 2 below.

Line 7 – As per AIR 11 Unmeasured Non-household Water Delivered has a confidence grade of C4. This reflects the fact that although this is heavily dependent on the number of unmeasured non-household properties it does contain certain assumptions and extrapolations to calculate a final volume. 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 B4. A 15% error estimate has been applied to BU Leakage in the MLE calculation. However as of AIR14 it is

anticipated that the error estimate will be reduced to 10% following the implementation of Netbase and the on-going improvement in data quality.

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 has a confidence grade of B2. The water balance components reconcile with measured distribution input to less than 5%.

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 & 32 - 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	78.29	69.71	26.79	4.73	22.06	26.58%	250.286	0%	0.000	
West	75.07	0.00	0.00	68.03	60.56	7.04	4.89	2.15	2.29%	416.627	0%	0.000	
Central	11.86	19.00	0.00	28.49	25.37	2.37	1.98	0.39	1.28%	918.730	0%	0.000	
East	146.51	207.00	0.00	305.54	272.09	47.97	19.47	28.50	8.77%	162.514	0%	0.000	
South	70.17	127.00	0.00	148.13	131.68	49.04	13.00	36.04	22.36%	71.313	0%	0.000	
Total	358.69	403.00	0.00	628.48	559.41					1819.470		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 AIR13 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 since 2011/12. For 2012/13 the SOSI remains 100. This is mainly due to the following reason;

- There has been a significant reduction in Distribution Input (DI) since 2011/12. For 2012/13 the total average DI is 559.41M/l/d, down from 585.09M/l/d the previous year, which represents a decrease of 4.59%. This decrease has been influenced by a number of factors including reduced leakage from the supply network and lower than expected household consumption.

There are also a number of other factors that influence the AIR13 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 AIR13 is believed to be an accurate reflection of the current NI Water SOSI. It is possible that further review for the WRMP during 2013 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 11 Table 7.

NORTHERN IRELAND WATER - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 10A NON FINANCIAL MEASURES

Security of Supply Index - Reference levels 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	78.29	69.71	26.79	4.73	22.06	26.58%	250.286	0%	0.000	
West	75.07	0.00	0.00	68.03	60.56	7.04	4.89	2.15	2.29%	416.627	0%	0.000	
Central	11.86	19.00	0.00	28.49	25.37	2.37	1.98	0.39	1.28%	918.730	0%	0.000	
East	146.51	207.00	0.00	305.54	272.09	47.97	19.47	28.50	8.77%	162.514	0%	0.000	
South	70.17	127.00	0.00	148.13	131.68	49.04	13.00	36.04	22.36%	71.313	0%	0.000	
Total	358.69	403.00	0.00	628.48	559.41					1819.470		0.000	100

Table 10a (ii) – Non Financial Measures - Security of Supply Index – Reference levels of service (TOTAL)

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 AIR13 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 since 2011/12. For 2012/13 the SOSI remains 100. This is mainly due to the following reason;

- There has been a significant reduction in Distribution Input (DI) since 2011/12. For 2012/13 the total average DI is 559.41M/l/d, down from 585.09M/l/d the previous year, which represents a decrease of 4.59%. This decrease has been influenced by a number of factors including reduced leakage from the supply network and lower than expected household consumption.

There are also a number of other factors that influence the AIR13 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 AIR13 is believed to be an accurate reflection of the current NI Water SOSI. It is possible that further review for the WRMP during 2013 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 11 Table 7.

Table 10a (iii) – Non Financial Measures - Security of Supply Index – Critical Period (TOTAL)

As indicated in AIR12 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.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 11 NON FINANCIAL MEASURES
WATER SERVICE ACTIVITIES (NI Water Only)**

DESCRIPTION	UNITS	DP	1		2		3		4		5		6		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG	2012-13	CG	
A ASSET BALANCE AT APRIL 1															
1	Total length of mains	km	2	25,972.00	B3	26,067.07	B3	26,349.22	B3	26,435.45	B3	26,441.81	B3	26,499.03	B3
B CHANGES DURING REPORT YEAR															
2	Mains renewed	km	2	136.00	A2	288.62	C2	172.22	A2	174.49	A1	445.82	A2	285.42	A2
3	Mains relined	km	2	0.00	A2	0.00	A2	0.00	A1	0.00	A1	0.00	A1	0.00	A1
4	Mains cleaned (total)	km	2	8,259 jobs	C5	1,925.35	B4	1,487.62	B3	837.41	B3	839.75	B3	683.75	B3
6	New mains	km	2	238.00	A2	354.01	C2	298.88	A2	121.17	B2	118.16	B2	89.05	B2
7	Mains abandoned and other changes	km	2	259.00	A2	360.48	C2	325.10	A2	195.57	A1	476.63	A2	357.29	A2
8	Lead communication pipes replaced - quality	nr	0	659	B3	168	B3	380	B3	258	B3	341	B3	455	B2
9	Lead communication pipes replaced - maintenance or other	nr	0			385	B3	1371	B3	1,328	B3	2,119	B3	1,271	B3
10	Communication pipes replaced - other	nr	0	9,809	B4	8,801	B3	6,418	B3	3,156	B3	10,253	B3	8,566	B3
11	Mains bursts per 1000km	nr	0	139	C3	141	B3	147	B3	137	B3	101	B3	93	B3
C ASSET BALANCE AT MARCH 31															
12	Total length of mains	km	2	26,067.07	B3	26,349.22	B3	26,435.45	B3	26,441.81	B3	26,499.03	B3	26,700.79	B3
D DISTRIBUTION STUDIES															
13	Cumulative number of distribution zone studies completed	nr	0	30	A1	46	A1	54	A1	60	A1	64	A1	71	A1
14	Distribution zone studies ongoing	nr	0	21	A1	19	A1	17	A1	11	A1	7	A1	0	A1
15	Total distribution zones identified for study	nr	0	71	A1	71	A1	71	A1	71	A1	71	A1	71	A1
16	Cumulative % distribution zone studies completed	%	1	42.3	A1	64.8	A1	76.1	A1	84.5	A1	90.1	A1	100.0	A1
17	Percentage population/properties - completed studies	%	1	43.1	A1	60.8	A1	71.9	A1	80.9	A1	87.0	A1	100.0	A1
E NOMINATED WATER SERVICE OUTPUTS															
18	Completion of nominated trunk main schemes to improve security of supply	nr	0							2	A1	0	A1	2	A1
19	Completion of nominated water treatment works schemes to improve water quality	nr	0							2	A1	0	A1	0	A1
20	Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks	nr	0							5	A1	3	A1	1	A1

Table 11– Water Service Activities

Line 1 – Total length of mains at 1st April 2012

The value of 26,499.03km, confidence grade B3, has been extracted from line 12 of the AIR12 Table 11.

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	285.42	A2	0.00	A1	285.42	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, dated March 2010. The amendment required that mains activity lengths should only be reported on line 2 on the basis of primary purpose for the activity.

EP's input to this line has decreased from 445.82km in AIR12 to 285.42km in AIR13 due to the lower funding figure during the last year of the PE10 period. The corresponding figure was 174.49km in AIR11.

The confidence grade remains as A2, as was in AIR 12.

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	A1

At present this operation is not carried out by Networks Water or EP.

Line 4 - Mains cleaned (Total)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
4	Mains cleaned (total)	km	2	0.00	A1	683.75	B2	683.75	B3

Detailed data for the reporting period was collated by the Water Business Unit using MWM system reports. As directed by the Regulator, repeat flushings of the same length of main have been discounted.

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 which is then converted from units to km using the factor of 0.156km per flushing.

2013 information return is:

4383no. flushings x 0.156km = 683.75km. This comprises 2585 flushing MST's and 1798 reactive flushing jobs. The AIR12 figure was 839.75km.

A flushing programme using Maintenance Scheduled Tasks (MST's) has been established and Work Orders are automatically generated and sent to the Field Operators. This information is captured on the MWM system.

There is a notable reduction in the no. of reactive flushing's which may be due to the continuing improvement in water quality standards through the on-going mains rehabilitation schemes.

Although the total no. of reactive flushing jobs (1798no.) 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.

The confidence grade of B3 is retained from AIR12, due to the use of the applied flushing factor.

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	61.44	A2	27.61	B2	89.05	B2

The Networks Water 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).

The Networks Water 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.

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, dated March 2010. The amendment required that mains activity lengths should only be reported on line 6 on the basis of primary purpose for the activity. **The EP input of 61.44km into line 6 includes 20.45km from nominated trunk main projects.**

Line 7 - Mains abandoned and other changes (km)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
7	Mains abandoned and other charges	km	2	357.29	A2	0.00	A1	357.29	A2

The EP input into line 7 includes 2.47km from nominated trunk main projects.

Networks Water has not abandoned any mains.

Line 8 - Lead Communication pipes replaced – quality (no.)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
8	Lead communication pipes replaced - quality	nr	0	0	A1	455	B2	455	B2

This figure shows an increase (from 341 to 455) from last year and may be attributable to a continued upturn in more house renovations being carried out as opposed to 'new builds'.

Line 9 - Lead Communication pipes replaced – maintenance/other (no.)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
9	Lead communication pipes replaced – maintenance or other	nr	0	1,140	A1	131	B3	1,271	B3

The decrease in the replacement of lead communication pipes (maintenance or other) during the AIR13 period (from 2,119 to 1271) has been as a result of:

- Major change due to EP carrying out less work in Belfast this year as opposed to some more urban locations during the AIR12 period and the overall decrease in the level of work carried out by EP,
- Networks Water has again analysed work orders in more detail this year and identified lead related repairs by checking both Work Order descriptions and completion comments text for every single work order. This is the second year that this level of detailed analysis has been carried out and shows a small increase from AIR12.

Line 10 - Communication pipes replaced – other (no.)

Line	Description	Units	DP	EP	EP CG	Networks Ops	Networks Ops CG	Total	Overall CG
10	Communication pipes replaced - other	nr	0	7,414	A1	1152	B3	8,566	B3

The overall total decrease in the replacement of communication pipes (other) during the AIR13 period has been as a result of:

- EP's decreased level of work and the fact that the work is taking place in a more rural environment during AIR13, with less properties served per length of mains
- Networks Water has paid more attention to the classification of Comms Pipe Replacements as opposed to Mains Repairs. The latter is also reflected in the reduced no. of Mains Repairs claimed and a related increase in the no. of Comms Pipes replaced. In other words, where a job has been logged as a mains repair but a repair has been completed which has not necessitated a shutdown of the network this has been classified as a Comms Pipe job and the number shows a small increase from AIR12.

Lines 2-10 General Commentary

NIW intends to replace/rehabilitate approximately 1.03% of the water mains network on an annual basis. This is equivalent to 495 km over the 2 year period of 13/14 and 14/15.

One of the main drivers for the water mains 'rehab' project is water quality. The rehab programme 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.

PC13 Lead Communication Replacement Pipe Programme – NIW's Lead Communication Pipe Replacement Programme is being developed for implementation during PC13. Asset Performance is working in conjunction with the Quality and Compliance team and NIHE developing a prioritised replacement programme. This involves extensive data collection/analysis from existing Zonal Study information, water sampling and data analysis which will lead to a Capital Programme of £500k in each of the PC13 years.

Breakdown of Water Mains Activity

Activity	Length (km) - 2dp			PC10 Cumulative Total
	2010-11	2011-12	2012-13	
New mains (WMRP)	31.60	66.31	40.99	138.90
Renewed mains (WMRP)	172.70	443.95	285.42	902.07
Relined mains (WMRP)	0.00	0.00	0.00	0.00
Total WMRP Activity	204.30	510.26	326.41	1,040.97
Nominated trunk mains- New	55.23	25.05	20.45	100.73
Nominated trunk mains-Renewed	1.49	1.87	0.00	3.36
Total Nominated trunk mains Activity	56.72	26.92	20.45	104.09
New mains - New development	34.33	27.02	27.61	88.96
Total Mains Activity in the Period	295.35	564.20	374.47	1,234.02
Nominated Trunk Main Activity in 2012/13			New (km)	Renewed (km)
Ballydougan (Castor Bay)-Newry (Phase 1)		JG035	11.23	
Ballydougan (Castor Bay)-Newry (Phase 2a)		JG035		
Castor Bay-Dungannon		JG036	2.47	
Castor Bay-Belfast Phase 2		JR342		
River Strule Abstraction		JN226	6.75	
Sub-Total			20.45	0.00
Total			20.45	

Lines 2-10 Data Sources

EP

Within 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 the project Cost Management System. The information is collated from each individual work package within the Cost Management System 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 EP's understanding of their reporting requirements, the quality and robustness of their Cost Management System, on-site measurements and NI Water's Captrax management system which stores the information and is used to populate the AIR table.

Network Water Operations

Data from Network Water Operations for 1st April 12 – 31st March 13 was collated by Field Managers, confirmed and input onto a spreadsheet managed by the Water Business Unit who collate the data for the annual reporting period. For AIR14 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Lines 2 - 10 Confidence Grades

Asset Management Section has compiled submitted data from EP and from Networks Water Operations to populate the values for these lines.

The confidence grades have been reviewed by AMS, taking into consideration those proposed by both NIW sections and the AIR12 Reporter's Report, as follows:

Although EP has listed a confidence grade of A1 for lines 9 and 10, the latter has been amended to B3 (in line with that from Networks Water Operations).

The AIR10 Reporter's Recommendation stated that lines 9 and 10 should have a confidence grade B3 due to the current method for breakdown between lead and non-lead communications pipes and the derivation of quality/maintenance drivers. The AIR12 Reporter's Report also stated ***'The B2 grade for Line 6 and B3 grades for lines 9-10 are considered appropriate.'***

The confidence grades for lines 2 and 7 were proposed by EP as A2, as these lines are not relevant to Networks Water Operations. In line with the AIR12 Reporter's Report lines 2 and 7 have been allocated A2.

The confidence grade for line 3 was proposed by EP as A1 due to the zero return. The AIR12 Reporter's Report accepted the A1 for line 3, and has thus been maintained.

With reference to Line 4 the AIR11 Reporter's Report stated ***'Given the recent improvements, but retention of the applied flushing factor, we agree B3 remains appropriate for Line 4.'*** Hence the B3 is maintained for AIR13 Line 4.

The confidence grade for line 6 has been proposed as B2 as the EP confidence grade for this line was A1, and that from Networks Water Operations was B2; and the AIR12 Reporters Report accepts this position.

The confidence grade for line 8 was proposed by Networks Water Operations as B2. This line is not relevant to EP as they have zero as a return. B2 has been assigned to line 8 due to the comments below from the AIR12 Reporter's Report. ***'Given recent improvements in differentiating the quality driver, increase the overall grade in Line 8 to align with the applied NWO B2 grade. We acknowledge there may be some justification to improve lines 9-10 in future if the material categorisation is improved'***.

The Reporter's AIR10 Recommendation previously recommended re-assessing the method for reporting of line 7, i.e. ***'Line 7 should include a mains adjustment factor to ensure that the calculation of Line 12 matches the total extracted from GIS'***. A process still has to be developed to ensure that GIS can provide a single source of data for this line. However the latter is presently not possible with current NIW procedures. Hence NIW has not been able to alter its method for reporting the total length of abandoned mains in Table 11 Line 7, for AIR13.

In addition the ADAI project has a water infrastructure package designed to improve the data quality held in CAR. This will allow a baseline to be developed and reconciliation to be completed. The work package is expected to be completed in November 2013. It is proposed not to action this recommendation until the work package is completed.

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 12 – March 13 was collated using MWM system reports which when checked and confirmed were transferred onto a summary spreadsheet. A number of Repairs attributable to third party damage has 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

$$2535 - 61 \text{ (rechargeables)} / 26700.79\text{km} = 0.0927 \times 1000 = 92.7$$

Total Bursts per 1000km = 92.7

2009 information return was 3764

2010 information return was 3910

2011 information return was 3667

2012 information return was 2746

Proportion of Bursts within Line 11 detected by Proactive Methods

The total number of Mains Repairs carried out by NIW 2535 (including 61no. due to third party damage).

The number of Mains Repairs carried out by Networks Water Function due to non-proactive Leakage detection methods was 1467. The number of Mains Repairs carried out due to proactive Leakage detection methods was 1068.

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-repairs extracted. There is a notable reduction from 2012 figures primarily for the following reasons:

- There have been no freeze / thaw periods through Dec 12 and Jan 13.
- Mains Rehabilitation Schemes continue to have a positive impact in reducing the no. of defects.
- Focus is increasing in relation to ensuring that repairs due to third party damage are properly recharged.
- Continuing focus has been maintained on the classification of mains repairs as opposed to communication pipe replacements

Future Reporting

For AIR14 Line 11 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

The value of 26700.79km, confidence grade B3 has been extracted from AIC.

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. 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 AIR11 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.

Line 13 - Cumulative number of distribution zone studies completed

This value is derived from the number of zones studied year by year against a total of 71 no. zones in Northern Ireland with start/finish dates detailed below. 71 no. zonal studies have been completed since the start of the Zonal study programme. The latter is highlighted in yellow in the table below. Confidence Grade A1 reflects actual zonal study report.

Zonal Studies Start & Completion Dates (31 March 2013)				1st Update of Initial Study	
Zone	AIR13 Population	Start Date	Completion Date	Start Date	Completion Date
Craigavon West	21846	11/11/99	Aug-01	Jun-13	Nov-13
B'mena Borough	28556	20/04/00	Dec-02	Jun-13	Nov-13
Silent Valley	3507	16/07/01	Jan-Mar 2004		
Fofanny Newry	52045	16/07/01	Jan-Mar 2004		
Camlough	14817	10/10/01	Jan-Mar 2004		
Ballinrees West	17042	07/01/02	Apr-Jun 2003		
Breda South	38505	20/03/01	Oct-02	Jun-13	Nov-13
Cityside	58451	09/08/00	Oct-04		
Castor Bay/Armagh	16316	18/12/02	Feb-06		
Seagahan	32194	18/12/02	Feb-06		
Clay Lake	6792	18/12/02	Feb-06		
Ards North	28219	24/06/03	Nov-05		
Lough Cowey	9665	24/06/03	Nov-05		
Bangor Outer	44505	24/06/03	Nov-05		
Castor Bay/M'liskmisk	16760	19/11/03	Nov-05	Jun-13	Nov-13
Altnahinch	31441	04/06/01	Feb-03		
Drumabest	13465	05/06/01	Feb-03		
Ballinrees East	23269	07/01/02	Apr-Jun 2003		
Ballinrees Central	26032	07/01/02	Apr-Jun 2003		
Dungonnell	37576	30/05/01	Jan-05	Jun-13	Nov-13
North Tyrone	30143	10/05/01	May-Jun 2006		
South West	13682	10/05/01	May-Jun 2006		
Tardree	10655	04/09/03	Mar-09		
Dunore West	44515	04/09/03	Mar-09		
Lough Fea	30138	23/04/01	Dec-07		
Castlereagh	26103	19/05/02	Nov-07		
Purdysburn East	32159	19/05/02	Nov-07		
Castor Bay Shanmoy	22278	12/11/02	Dec-09		
Altmore/Gortlenaghan	11639	12/11/02	Dec-09		
Newtownards Town	32722	02/11/04	Dec-07		
Ballintemple	15670	02/07/02	Apr-09		
Lough Ross	10568	02/07/02	Apr-09		

Zone	AIR13 Population	Start Date	Completion Date	Start Date	Completion Date
Fofanny B'bridge	19348	05/04/01	Dec-07	Jun-13	Nov-13
Castor Bay/Banbridge	30596	05/04/01	Dec-07	Jun-13	Nov-13
Carmony East	16730	04/07/01	Mar-08		
Waterside	25698	04/07/01	Mar-08		
Moyola	40982	01/10/01	Aug-09		
Lisburn Town	41397	29/04/03	Jan-08		
Lisburn Rural	10417	29/04/03	Jan-08		
Mid Down	29651	02/11/04	Feb-09		
Ballygowan	6473	02/11/04	Feb-09		
Comber	13139	02/11/04	Feb-09		
Craigavon North	35794	19/11/03	Feb-08	Jun-13	Nov-13
Craigavon South	21221	19/11/03	Feb-08	Jun-13	Nov-13
Limavady	31204	19/05/04	Sep-08		
North East	4249	19/05/04	Sep-08		
Zone	AIR13 Population	Start Date	Completion Date	Start Date	Completion Date
South	20995	06/01/08	Mar-13		
South East	14339	06/01/08	Mar-13		
N Down/Bangor	31951	01/04/06	Jan-08		
South Down	15886	15/06/07	Mar-09		
Downpatrick	8433	15/06/07	Mar-09		
Newcastle	10263	15/06/07	Mar-09		
Mourne Coastal	12574	15/06/07	Mar-09		
Breda North	54099	22/02/08	Oct-09		
Belfast East	37673	22/02/08	Oct-09		
Hollywood	8444	22/02/08	Oct-09		
Dunmurry	35299	Jul-08	Feb-12		
Lisburn South Rural	20560	Jul-08	Feb-12		
Ballywonard/Dunanney	39462	Jun-08	Jun-10		
Ballysillan/Ballyaghagan	34176	Jun-08	Jun-10		
West Belfast rural	10338	Jun-08	Jun-10		
Omagh	39559	Jul-08	Mar-13		
Dunore East	21011	Jun-09	Mar-12		
Killylane	32895	Jun-09	Mar-12		
Lough Mourne	7681	05/02/09	Sep-10		
Carrickfergus	38463	05/02/09	Sep-10		
Newtownabbey	35197	05/02/09	Sep-10		
Whiterock	33109	Jun-09	Jun-12		
B'gomartin/P'burn West	34055	Jun-09	Jun-12		
Oldpark	65046	Jun-09	Jun-12		
Ballygomartin North	29788	Jun-09	Jun-12		
KEY					
Started/finished	71	Studies completed population		1819470	
Started/ongoing	0	N Ireland population		1819470	
Programmed to start	0				
Remaining zones to start	0	Percentage Complete		100.0%	

Line 14 - Distribution zone studies ongoing

There are no ongoing zonal studies at present but the update of 9 models is currently out to tender. The information is taken from the above Table as held and updated by the Project Management team.

The models will be updated following a NIW standardised specification and methodology. In addition the **Water Infrastructure Investment Planning** project is investigating and identifying capital maintenance and on water main assets. September 13 is the delivery date for this programme.

Line 15 - Total distribution zones identified for study

Total zones identified for study encompasses the 71 no. Distribution Zones in Northern Ireland.

Line 16 - Cumulative % distribution zone studies completed

The percentage figure is calculated from the Zonal studies completed (71 no.) compared to the number of zones to be studies (71 no.). Figures from above Table.

Line 17 - Percentage population/properties - completed studies

The population for zones is calculated using the zone boundaries which are applied to the POINTER address database and the NISRA population projections, as described in the commentary for the Leakage Table. The 100% accounts for studies updated before 31st March 2013.

Line 18 - Completion of nominated trunk main schemes to improve security of supply

There were two PE10 nominated trunk mains delivered within the AIR13 period, both from within the JG035 project, with the completion of Ballydougan to Newry Phase 1 on the 25th May 2012 and the completion of Ballydougan to Newry Phase 2a on the 17th December 2012.

The completion of Phase 1 and 2a of JG035 Ballydougan to Newry reduces the risk of supply interruptions and provides flexibility of supply in the Craigavon and Lough Ross supply zones as well as reducing the risk of DG2 and supply interruptions. It also provides capacity for planned growth in the areas supplied.

CIM also contains the historic expenditure associated with the final closure of JR348 Dunore to HydePark pumping main replacement and JS112 North Down Strategic Trunk Main. The completion noted within the CIM for JR460 Gravity II McVeighs Well to Oldpark has been discounted as this project has not started delivery.

The confidence grades for this line were determined using the reporting guidance and were assessed as A1 – based on the evidence within the methodology and the limited volume of completions the confidence gradings available is limited.

Trunk Mains Delivered during the first year of PC10 – AIR11 Period

Project ID Code	PC10 Reference Code	Nominated Trunk Main	Beneficial Use Date
JR416	TMS/002	Cross Town Main	Pre Mar-2011
JG036	TMS/001	Complete Castor Bay to Dungannon	Apr-2011

Trunk Mains Delivered during the third year of PC10 – AIR 13 period

Project ID Code	PC10 Reference Code	Nominated Trunk Main	Beneficial Use Date
JG035	TMS/003	Ballydougan to Newry Ph1	25/05/2012
JG035	TMS/005	Ballydougan to Newry Ph2A	17/12/2012

This represents the successful completion of the PE10 Trunk mains programme.

Line 19 - Completion of nominated water treatment works schemes to improve water quality

No nominated water treatment works schemes were completed in the AIR13 period.

The confidence grade for this line was determined using the reporting guidance and was assessed as A1.

WTWs Delivered during the first year of PC10 – AIR11 Period

Capital Investment Project ID Reference Code	Project Name	Project Code	Beneficial Use Date	AIR11 Comments
WTW/001	Carmony WTW	JL723	28/2/11	The Carmony WTW project has recently been extended outside the PC10 scope to address base maintenance issues within the CWT not identified within the original scope of the works.
WTW/002	Lough Braden WTW	KR389	2/3/11	This represents the delivery of the PC10 nominated output at Lough Bradan WwTW.

This represents the successful completion of the PE10 WTW programme.

Line 20 - Completion of nominated improvements to increase the capacity of service reservoirs and clear water tanks

There was a single PE10 nominated SR completed in the AIR13 period, JB649 Tully SR, which achieved beneficial use on the 6th December 2013. In the PE10 Monitoring Plan, NI Water included the completion or start of construction on upgrades to seven service reservoirs and two clear water tanks.

Excluded from the PE10 claim is the completion of JB657 Garstangs Hill SR Ballymena WPS and JA264 Crosskennan WPS which were not nominated outputs. JC385 Monaclogh SR was not a nominated output and despite the reported completion dates has yet to start construction.

The confidence grade for this line was determined using the reporting guidance and was assessed as A1.

SRs/CRs/CWTs Delivered during the first year of PC10 – AIR11 Period

Project ID Code	PC10 Reference Code	SR or CWT	Beneficial Use Date	Comment
JB665	SRV/007	Tullaghans SR	Aug-2010	1.6MI added and operational Mar 11
JC381	SRV/006	Altnahinch CR	Nov-2010	2.2MI added and operational Mar 11
JC378	SRV/005	Glenlough SR	Dec-2010	6.0MI added and operational Mar 11
JR151	SRV/003	Crewe Hill SR	Jan-2011	3.3MI added and operational Mar 11
JB648	SRV/004	Dungonnell CR	Mar-2011	5.5MI added and operational Mar 11

SRs/CRs/CWTs Delivered during the second year of PC10 – AIR12 Period

Project ID Code	PC10 Reference Code	SR or CWT	Beneficial Use Date	Comment
JF583	SRV/001	Carland SR	Apr-2011	6.0MI added (operational April11)
JS179	SRV/002	Ballylone SR	Jun-2011	5.6MI added (operational June11)
JV827	SRV/008	Tullyhappy SR	Dec-2011	4.5MI added (operational Dec 2011)

SRs/CRs/CWTs Delivered during the Third year of PC10 – AIR13 Period

Project ID Code	PC10 Reference Code	SR or CWT	Beneficial Use Date	Comment
JF583	SRV/010	Tully SR	06/12/2012	4.7MI new service reservoir

This represents the completion of the PE10 SR/CWT programme.

PC10 CHANGE CONTROL PROCESS 01
NOMINATED OUTPUTS

Water Treatment Works		
Ref.	Project Name	Drivers
WTW001	Carriemoney WTW	Pesticides, Manganese and Aluminium.
WTW002	Lough Braden WTW	Turbidity, THMs
WTW003	Killybegs WTW - Study	THMs, Aluminium.

PC10 CHANGE CONTROL PROCESS 01
TABLE 8 -NOMINATED OUTPUTS

Project status			Water Treatment Works			Justification of change of output (other than delivery date)
Project Ref.	New addition	Deletion	Ref.	Project Name	Drivers	
			WTW001	Carriemoney WTW	Pesticides, Manganese and Aluminium.	Note - Carriemoney WTW upgrade was extended to cover the repair of significant leaks into the CWT from failures in the roof. Original scope delivered by Feb 2011
			WTW002	Lough Braden WTW	Turbidity, THMs	
			WTW003	Killybegs WTW - Study	THMs, Aluminium.	Complete by 31/03/11 - due to combination of PE and TD targets this may be an issue as this project was scheduled to complete 11/12 in ED and completed in 10/11 under PE

PE10 AIR 13 Outturn report

Project status						Water Treatment Works			Justification of change of output (other than delivery date)	Comments
Project Ref.	No change	Date change	Content or other change	New addition	Deletion	Ref.	Project Name	Drivers		
						WTW001	Carriemoney WTW	Pesticides, Manganese and Aluminium.	31/03/2011	Basic maintenance additions continued for some period after the completion of the quality elements of the project.
	Y					WTW002	Lough Braden WTW	Turbidity, THMs	02/03/2011	
						WTW003	Killybegs WTW - Study	THMs, Aluminium.		Study completed in PC13

Trunk main projects		
Ref.	Project Name	Drivers
TMS001	Castor Bay to Dunganon	Iron, Turbidity, Pesticides, Water Quality and Balance Risks, operational supply risks.
TMS002	Cross Town Main	Cryptosporidium Risk, Water Quality and Balance Risks, operational supply risks.
TMS003	Castor Bay to Newry Phase 1	Water Quality Risks (ADs), Water balance risks (SD Balance), operational Supply risks.
TMS004	Castor Bay to Belfast Phase 2	Water Quality Risks (ADs), Water balance risks (SD Balance), operational Supply risks.

Project status			Trunk main projects			Justification of change of output (other than delivery date)
Project Ref.	New addition	Deletion	Ref.	Project Name	Drivers	
			TMS001	Castor bay to Dunganon	Iron, Turbidity, Pesticides, Water Quality and Balance Risks, operational supply risks.	31/03/2011
			TMS002	Cross Town Main	Cryptosporidium Risk, Water Quality and Balance Risks, operational supply risks.	22/11/2010
			TMS003	Castor Bay to Newry Phase 1	Water Quality Risks (ADs), Water balance risks (SD Balance), operational Supply risks.	31/03/2012
		Y	TMS004	Castor Bay to Belfast Phase 2	Water Quality Risks (ADs), Water balance risks (SD Balance), operational Supply risks.	31/03/2015 - Subject to PC13 agreement
			TMS005	Castor Bay to Newry Phase 2a	Water Quality Risks (ADs), Water balance risks (SD Balance), operational Supply risks.	Under project code J0305 Phase 2a of the Ballydoogan to Newry Trunk Main programme to improve security of supply to the Newry area. Completion of Phase 2a estimated as 11/03/13
			TMS006	Ballymena to Limavady/Londonderry Supply Augmentation	Water balance risks (SD Balance), operational Supply risks.	Requirement to optimise the use of water provided by the PPP plant at Ballymena. Completion 31/03/12

Project status						Trunk main projects			Justification of change of output (other than delivery date)	Comments
Project Ref.	No change	Date change	Content or other change	New addition	Deletion	Ref.	Project Name	Drivers		
						TMS001	Castor bay to Dunganon	Iron, Turbidity, Pesticides, Water Quality and Balance Risks, operational supply risks.	31/03/2011	
						TMS002	Cross Town Main	Cryptosporidium Risk, Water Quality and Balance Risks, operational supply risks.	22/11/2010	
						TMS003	Castor Bay to Newry Phase 1	Water Quality Risks (ADs), Water balance risks (SD Balance), operational Supply risks.	25/05/2012	Delivery date slipped slightly
				Y		TMS004	Castor Bay to Belfast Phase 2	Water Quality Risks (ADs), Water balance risks (SD Balance), operational Supply risks.	PC13	
					Y	TMS005	Castor Bay to Newry Phase 2a	Water Quality Risks (ADs), Water balance risks (SD Balance), operational Supply risks.	17/12/2012	
							Ballymena to Limavady/Londonderry Supply Augmentation	Requirement to optimise the use of water provided by the PPP plant at Ballymena. Completion 31/03/12		Not noted as a nominated output

Service Reservoirs		
Ref.	Project Name	Drivers
SRV001	Carlisle SR	less than 2hrs storage when new TM project commissioned
SRV002	Ballykine SR	Ballykine system has negligible storage.
SRV003	Crew Hill SR	4.3 storage hours
SRV004	Dungannon CWT	7.5hrs turnover in CWT gives operational difficult (security of supply)
SRV005	Glenlough SR	6.6hrs storage with project alpha commissioned and rezoned (security of supply)
SRV006	Altrincham CWT	7.6hrs turnover in CWT gives operational difficulty (security of supply)
SRV007	Tullaghan SR	11hrs storage when rezoned.
SRV008	Tullyhappy SR	Security of supply for Lough Ross Zone
SRV009	Crivee SR	6.5hrs storage
SRV010	Tully SR	13hrs current storage. DZS rezoning requires 6.5 ML tank
SRV011	Lough Maconry CWT	Improve security of supply via 15ML tank provision.
SRV012	Drumaraod CWT	To be confirmed
SRV013	Killybegs CWT	To be confirmed
SRV014	Service Reservoir Rehabilitation Programme continuation.	Prioritised in conjunction with DWL continuation of Service Reservoir rehabilitation programme.

Project status			Service Reservoirs			Justification of change of output (other than delivery date)
Project Ref.	New addition	Deletion	Ref.	Project Name	Drivers	
			SRV001	Carlisle SR	less than 2hrs storage when new TM project commissioned	28/03/2011
			SRV002	Ballykine SR	Ballykine system has negligible storage.	31/03/2011
			SRV003	Crew Hill SR	4.3 storage hours	18/01/2011
			SRV004	Dungannon CWT	7.5hrs turnover in CWT gives operational difficult (security of supply)	28/03/2011
			SRV005	Glenlough SR	6.6hrs storage with project alpha commissioned and rezoned (security of supply)	20/12/2010
			SRV006	Altrincham CWT	7.6hrs turnover in CWT gives operational difficulty (security of supply)	25/10/2010
			SRV007	Tullaghan SR	11hrs storage when rezoned.	31/05/2010
			SRV008	Tullyhappy SR	Security of supply for Lough Ross Zone	31/03/2012
			SRV009	Crivee SR	6.5hrs storage	31/03/2014
			SRV010	Tully SR	13hrs current storage. DZS rezoning requires 6.5 ML tank	31/03/2013
		Y	SRV011	Lough Maconry CWT	Improve security of supply via 15ML tank provision.	31/03/2015
		Y	SRV012	Drumaraod CWT	To be confirmed	31/03/2017
		Y	SRV013	Killybegs CWT	To be confirmed	31/03/2014 - Subject to PC13 agreement and a review of the treatment process
			SRV014	Service Reservoir rehabilitation Programme continuation.	Prioritised in conjunction with DWL continuation of Service Reservoir rehabilitation programme.	
	Y		SRV015		Improve security of supply allowing PPP water to be used more effectively within the Ballymena area.	31/03/2011
		Y	SRV016	Croskeman SR, Antrim, Water Pumping Station.	Improve security of supply allowing PPP water to be used more effectively within the Ballymena area.	30/06/2010
		Y	SRV017	Garstings Hill SR, Ballymena, Water Pumping station.	Improve security of supply allowing PPP water to be used to supplement Altrincham water in the Moyle area.	31/03/2013
				Glenlough Pumping Station & Pumping Main		

Project status						Service Reservoirs			Justification of change of output (other than delivery date)	Comments
Project Ref.	No change	Date change	Content or other change	New addition	Deletion	Ref.	Project Name	Drivers		
						SRV001	Carlisle SR	less than 2hrs storage when new TM project commissioned	30/04/2011	Notes - PE10 noted delivery in the previous year
						SRV002	Ballykine SR	Ballykine system has negligible storage	30/06/2011	Notes - PE10 noted delivery in the previous year
						SRV003	Crew Hill SR	4.3 storage hours	18/01/2011	
						SRV004	Dungannon CWT	7.5hrs turnover in CWT gives operational difficult (security of supply)	28/03/2011	
						SRV005	Glenlough SR	6.6hrs storage with project alpha commissioned and rezoned (security of supply)	20/12/2010	Change in BJ date
						SRV006	Altrincham CWT	7.6hrs turnover in CWT gives operational difficulty (security of supply)	05/11/2010	Change in BJ date
						SRV007	Tullaghan SR	11hrs storage when rezoned.	31/08/2010	Change in BJ date
						SRV008	Tullyhappy SR	Security of supply for Lough Ross Zone	31/12/2011	PE10 noted delivery by 31/03/12
						SRV009	Crivee SR	6.5hrs storage	PC13	
						SRV010	Tully SR	13hrs current storage. DZS rezoning requires 6.5 ML tank	09/12/2012	Delivered early than anticipated
				Y		SRV011	Lough Maconry CWT	Improve security of supply via 15ML tank provision.	PC15	
				Y		SRV012	Drumaraod CWT	To be confirmed	PC15	
				Y		SRV013	Killybegs CWT	To be confirmed	PC15	
						SRV014	Service Reservoir rehabilitation Programme continuation.	Prioritised in conjunction with DWL continuation of Service Reservoir rehabilitation programme.		Reduced programme delivered in PC10
								Improve security of supply allowing PPP water to be used more effectively within the Ballymena area.		Not nominated in PE10
							Croskeman SR, Antrim, Water Pumping Station.	Improve security of supply allowing PPP water to be used more effectively within the Ballymena area.		Not Nominated in PE10
							Garstings Hill SR, Ballymena, Water Pumping station.	Improve security of supply allowing PPP water to be used to supplement Altrincham water in the Moyle area.		Not Nominated in PE10
							Glenlough Pumping Station & Pumping Main			

Water Resources		
Ref.	Project Name	Drivers
WRS001	Shule Abstraction.	Completion of increased abstraction from Shule to Deeg WTW to underpin security of supply PC10 index
WRS002	Completion of Inspection (Panel) Engineer's Recommendations on Impounding Reservoir.	Completion of reservoir inspection engineer's recommendations for impounding reservoir safety.
WRS003	Completion of new Water Resource Strategy in 2010.	Completion of Water Resource Management Plan to inform future investment for PC13.

Project status			Water Resources			Justification of change of output (other than delivery date)
Project Ref.	New addition	Deletion	Ref.	Project Name	Drivers	
			WRS001	Shule Abstraction.	Completion of increased abstraction from Shule to Deeg WTW to underpin security of supply PC10 index	31/03/2013
			WRS002	Completion of Inspection (Panel) Engineer's Recommendations on Impounding Reservoir.	Completion of reservoir inspection engineer's recommendations for impounding reservoir safety.	Ongoing - substantial additional work identified within the programme
			WRS003	Completion of new Water Resource Strategy in 2010.	Completion of Water Resource Management Plan to inform future investment for PC13.	Ongoing - final version in development

Project status						Water Resources			Justification of change of output (other than delivery date)	Comments
Project Ref.	No change	Date change	Content or other change	New addition	Deletion	Ref.	Project Name	Drivers		
						WRS001	Shule Abstraction.	Completion of increased abstraction from Shule to Deeg WTW to underpin security of supply PC10 index	PC13 - project yet to completed	
						WRS002	Completion of Inspection (Panel) Engineer's Recommendations on Impounding Reservoir.	Completion of reservoir inspection engineer's recommendations for impounding reservoir safety.	PC13 - project recently re-rendered	
						WRS003	Completion of new Water Resource Strategy in 2010.	Completion of Water Resource Management Plan to inform future investment for PC13.	Complete in PC10	

Defined activities		
Ref.	Project Name	Activity
WRS003	Water mains rehabilitation	900 km of new, replacement or rehabilitated water main under the water main rehabilitation programme (excluding trunk mains).

Project status			Defined activities			Justification of change of output (other than delivery date)
Project Ref.	New addition	Deletion	Ref.	Project Name	Activity	
			WRS003	Water mains rehabilitation	900 km of new, replacement or rehabilitated water main under the water main rehabilitation programme (excluding trunk mains).	

Project status						Defined activities			Justification of change of output (other than delivery date)	Comments
Project Ref.	No change	Date change	Content or other change	New addition	Deletion	Ref.	Project Name	Activity		
						WRS003	Water mains rehabilitation	900 km of new, replacement or rehabilitated water main under the water main rehabilitation programme (excluding trunk mains).		

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 11A NON FINANCIAL MEASURES
WATER SERVICE SERVICEABILITY INDICATORS (NIW Only)**

DESCRIPTION		1		2		
		NUMBER OF WTWs		OUTPUT FOR CALENDAR YEAR		CG
A	WATER TREATMENT WORKS - TURBIDITY	UNITS	DP	UNITS	DP	
		nr	0	MI/d	2	
1	95%ile greater than or equal to 0.5NTU	14		245.62		A3
2	95%ile less than 0.5NTU	6		73.57		A3
3	Turbidity not recorded	0		0.00		A3
4	Total	20		319.18		A3

Table 11a – Non Financial Measures – Water Service Serviceability Indicators**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 4 non-compliant small water treatment works/sources were also closed.

The turbidity compliance at WTWs has increased significantly in 2012 dropping from 28 exceedances of the limit in 2011 to 11 exceedances in 2012.

The guidance now requires that the PPP sites are assessed in their own separate table – table 42.

Lines 1 – 4 - Turbidity

The data used for the estimation of average flow at WTWs in Table 11a lines 1 - 4 was supplied from operations leakage metering. This data was estimated prior to 2005 to allow the scheduling of audit samples to meet regulatory requirements during the year. This scheduling was audited by DWI. For the purposes of scheduling from 2007, an estimate of expected daily throughput by works was received from operational scientists in order to populate the LIMS system for frequency of sampling. For returns since then the Distribution Input was calculated as the average daily flow from the various individual sites or amalgamation of associated readings obtained from leakage metering.

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. There were no sites put out of service during the reporting period, with the 20 NI Water sites reported on in table 11a.
- In addition to the 20 NI Water sites, the 5 PPP sites have been reported on separately in their own table.
- In its Drinking Water Quality Report for 2012, NI Water will be reporting overall on 25 sites.

2012 WTW Excluded from calculations

There were no sites excluded from the calculations.

2012 NIW WTW Included in calculations

WTW Code	WTW Name	MI/d	Turbidity 95 %ile	>= 0.5NTU	MI/d >= 0.5	MI/d < 0.5
W1302	Lough Fea	11.28	0.40	0		11.28
W1303	Dungonnell	6.73	0.50	1	6.73	
W1501	Killylane	11.79	0.50	1	11.79	
W1702	Altnahinch	8.31	0.40	0		8.31
W1706	Rathlin Borehole	0.08	1.00	1	0.08	
W2509	Clay Lake	3.74	0.50	1	3.74	
W2514	Seagahan	9.56	0.50	1	9.56	
W2706	Camrough	3.67	0.68	1	3.67	
W2801	Fofanny	36.51	0.48	0		36.51
W2802	Carran Hill	5.97	0.40	0		5.97
W3317	Dorisland	23.10	0.50	1	23.10	
W3801	Drumaroad	102.55	0.50	1	102.55	
W4301	Carmoney	19.06	0.50	1	19.06	
W4306	Caugh Hill	15.88	0.50	1	15.88	
W4501	Derg	14.59	0.50	1	14.59	
W4513	Lough Bradan	7.07	0.50	1	7.07	
W4523	Lough Macrory	9.81	0.40	0		9.81
W4541	Glenhordial	4.03	0.60	1	4.03	
W4701	Killyhevlin	23.77	0.60	1	23.77	
W4722	Belleek	1.69	0.40	0		1.69
	20 Sites				245.62	73.57

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		
					NR OF SOURCES	PROP'N DIST INPUT	BULK PROP'N OF D.I.	REPORT YEAR 2011-12	CG	
A SOURCE TYPES AND PUMPING					UNITS	DP	UNITS	DP	UNITS	DP
	nr	0	Prop'n (0-1)	3	Prop'n (0-1)	3				
1	Impounding reservoirs		21		0.736					B2
2	River abstractions		10		0.263					B2
3	Boreholes		1		0.000					B2
4	Source types and pumping; total		32		1.000					B2
5	Average pumping head - total	m.hd		1				127.7		B4
					TOTAL PROP'N OF D.I.		TOTAL NR OF WORKS			
B TREATMENT TYPE					UNITS	DP	UNITS	DP		
	Prop'n (0-1)	3	nr	0						
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		0.588		9					
10	Proportion of distribution input - W4		0.412		10					
11	Proportion of distribution input - total		1.000							
12	Total numbers of works				20					
					BAND 1	BAND 2	BAND 3	BAND 4		
					<= 165mm	166 - 320mm	321 - 625mm	> 625mm		
C POTABLE MAINS										
13	Potable mains (nominal bore)	km		2	21093.25	4032.95	1318.51	256.08		

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 2011-12				
A SOURCE TYPES AND PUMPING											
1	Impounding reservoirs			nr	0	Prop'n (0-1)	3				
2	River abstractions			2		0.066		B2			
3	Boreholes			4		0.934		B2			
4	Source types and pumping; total			0		0.000		B2			
5	Average pumping head - total	m.hd	1	6		1.000		B2			
							156.1	B4			
B TREATMENT TYPE				TOTAL PROP'N OF D.I.		TOTAL NR OF WORKS					
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				BAND 1		BAND 2		BAND 3		BAND 4	
13	Potable mains (nominal bore)	km	2	<= 165mm		166 - 320mm		321 - 625mm		> 625mm	
				0.00		0.00		16.42		0.00	

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS - (Total)**

DESCRIPTION				UNITS	DP	1	2	3	4
						NR OF SOURCES	PROP'N DIST INPUT	BULK PROP'N OF DI	REPORT YEAR 2011-12
A SOURCE TYPES AND PUMPING									
1	Impounding reservoirs								
2	River abstractions								B2
3	Boreholes								B2
4	Source types and pumping; total								B2
5	Average pumping head - total	m.hd	1					139.6	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						

UNITS		UNITS		UNITS	
nr	DP	Prop'n (0-1)	DP	Prop'n (0-1)	DP
23	0	0.452	3		
14		0.548			
1		0.000			
38		1.000			

TOTAL PROP'N OF D.I.	TOTAL NR OF WORKS
UNITS	UNITS
DP	DP
Prop'n (0-1)	nr
0.000	1
0.000	0
0.000	0
0.339	9
0.661	14
1.000	
	24

BAND 1 <= 165mm	BAND 2 166 - 320mm	BAND 3 321 - 625mm	BAND 4 > 625mm
21093.25	4032.95	1334.93	256.08

Table 12 – Water Explanatory Factors**Water Sources & Treatment Types – NIW only**

The following table is a summary of the status of NIW only water sources and their treatment types in service during the AIR13 period, and those in service on 31st March 2013. The status of the latter for the AIR12 period is also shown.

Location	Source Type	Treatment Type	In Service during AIR 12 Period	In Service at 31 st March 2012	In Service during AIR 13 Period	In Service at 31 st March 2013
Gortlenaghan	Borehole	SD	Yes	No	No	No
Shanmoy BHs	Borehole	SD	Yes	No	No	No
Lenamore Spring	Borehole	SD	Yes	No	No	No
Rathlin	Borehole	SD	Yes	Yes	Yes	Yes
Killylane	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Dungonnell	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Altnahinch	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Lough Fea	Lough (previously indicated as an Impounding Reservoir)	W3	Yes	Yes	Yes	Yes
Drumaroad	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Caugh Hill	Imp. Reservoir & River (Glenedra)	W3	Yes	Yes	Yes	Yes –Now viewed as 2No. sources
Glenhordial	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Lough Bradan	2 No – Lough Bradan Imp. Reservoir and Lough Lee	W4	Yes	Yes	Yes	Yes -Now viewed as 2 No. sources
Altmore	Imp. Reservoir	W3	Yes	No	No	No
Dorisland	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Lough Macrory	Lough (previously indicated as an Impounding Reservoir)	W4	Yes	Yes	Yes	Yes
Clay Lake	Imp. Reservoir	W4	Yes	Yes	Yes	Yes
Fofanny	3No Imp. Reservoir (Lough Island Reavey, Fofanny, Spelga)	W4	Yes	Yes	Yes	Yes –Now viewed as 3No. sources
Seagahan	Imp. Reservoir	W4	Yes	Yes	Yes	Yes
Camlough	Lough	W4	Yes	Yes	Yes	Yes
Killyhevlín	Lough	W4	Yes	Yes	Yes	Yes
Carran Hill	Lough	W4	Yes	Yes	Yes	Yes
Belleek	Lough	W3	Yes	Yes	Yes	Yes
Carmony	River	W4	Yes	Yes	Yes	Yes
Derg	River	W4	Yes	Yes	Yes	Yes
Glarryford	Borehole	W2	No	No	No	No
Cabragh	Borehole	SD	No	No	No	No
Total			24	20	20	24

Changes during the AIR13 Period

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, in line with the NIAUR Chapter 12 guidance that a number of updates were required to some WTWs regarding their sources.** These updates are 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. The above table highlights these changes in red text and are detailed 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 indicates that 16% of the raw water into the WTWs came from Glenadra River during the AIR13 period. 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 Glenadra 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 Glenadra 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 Glenadra 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 AIR13.

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 Caugh Hill WTWs, for AIR13.

3. **Lough Bradan WTWs**

It has only recently been advised through the Water Supply AIR Certification reports that 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. The 2 ML/D from Lough Lee would attribute on average 25% of the total inlet to Lough Bradan 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 Table 12.

5. Lough Fea

It has only recently been advised through the Water Supply AIR Certification reports that Lough Fea WTWs is fed by Lough Fea, which is a lough.

6. Lough Macrory

It has only recently been advised through the Water Supply AIR Certification reports that Lough Macrory WTWs is fed by Lough Macrory, which is a lough.

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.

Whilst reviewing the AIR13 Detail Certification (Supply) sheets, provided by the WTWs Plant Managers, it was realised that a number of other WTWs had more complex source systems than was being recognised through previous AIR reporting procedures. Although it appears that these additional sources fall outside the interpretation of sources as per the NIAUR Chapter 12 guidance NIW is reporting them within Table 12 due to their need to store and provide the raw water required for the WTWs.

NIW has therefore taken the decision to include the additional following updates for AIR13, which are highlighted in the blue text in the following table:

Location	Source Type	Treatment Type	In Service during AIR 12 Period	In Service at 31 st March 2012	In Service during AIR 13 Period	In Service at 31 st March 2013
Gortlenaghan	Borehole	SD	Yes	No	No	No
Shanmoy BHs	Borehole	SD	Yes	No	No	No
Lenamore Spring	Borehole	SD	Yes	No	No	No
Rathlin	Borehole	SD	Yes	Yes	Yes	Yes
Killylane	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Dungonnell	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Altnahinch	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Lough Fea	Lough (previously indicated as an Impounding Reservoir)	W3	Yes	Yes	Yes	Yes
Drumaroad	2No Imp. Reservoirs (Ben Crom IR & Silent Valley IR)	W3	Yes	Yes	Yes	Yes - Now viewed as 2No. sources

Location	Source Type	Treatment Type	In Service during AIR 12 Period	In Service at 31 st March 2012	In Service during AIR 13 Period	In Service at 31 st March 2013
Caugh Hill	Imp. Reservoir - Altnaheglish IR & River (Glenedra)	W3	Yes	Yes	Yes	Yes – Now viewed as 2No. sources
Glenhordial	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Lough Bradan	2 No Lough Bradan Imp. Reservoir, and Lough Lee	W4	Yes	Yes	Yes	Yes – Now viewed as 2No. sources
Altmore	Imp. Reservoir	W3	Yes	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	Yes	Yes Now viewed as 7No. sources
Lough Macrory	2No Imp. Reservoirs (Lough Fingrean IR & Lough Macrory- Lough (previously indicated as an Impounding Reservoir))	W4	Yes	Yes	Yes	Yes Now viewed as 2No. sources
Clay Lake	Imp. Reservoir	W4	Yes	Yes	Yes	Yes
Fofanny	3No Imp. Reservoir (Lough Island Reavey, Fofanny, Spelga)	W4	Yes	Yes	Yes	Yes – Now viewed as 3No. sources
Seagahan	Imp. Reservoir	W4	Yes	Yes	Yes	Yes
Camlough	Lough	W4	Yes	Yes	Yes	Yes
Killyhevlin	Lough	W4	Yes	Yes	Yes	Yes
Carran Hill	Lough	W4	Yes	Yes	Yes	Yes
Belleek	Lough	W3	Yes	Yes	Yes	Yes
Carmony	River	W4	Yes	Yes	Yes	Yes
Derg	River	W4	Yes	Yes	Yes	Yes
Glarryford	Borehole	W2	No	No	No	No
Cabragh	Borehole	SD	No	No	No	No
Total			24	20	20	32

It is noted that all the impounding reservoirs, listed above, receive water from their own catchments. Hence NI Water is applying 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.

The text below details the need for NI Water to include these additional sources in Table 12:

1. 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 AIR13.

2. 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 AIR13.

3. 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.

4. 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 AIR13 period. Ballinrees IR and Altikeeragh IR which are operated by PPP are not included in the table. The capacities of the additional IRs, which NI Water is reporting within AIR13, are highlighted below in red and blue text. This information clearly demonstrates the size and strategic need of these IRs to NIW, and hence the need to report on them.

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

Raw Water Source – IRs	Total Capacity(ML)	Head WTWs
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 Reavy IR	9092	FOFANNY WTW
Spelga IR	3559	FOFANNY WTW
Fofany IR	376	FOFANNY WTW
Glenhordial IR	92	GLENHORDIAL WTW
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 AIR13 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 AR13 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 2013, 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 and 2012.

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

Lenamore has been mothballed during AIR13.

Lines 1 - 4 and 6 - 11 - Distribution Input

Leakage has provided the AIR13 Distribution Input figure of 559.37 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.

A figure of 559.41 MI/d has been employed to derive the derivation of the Average Pumping Head as this is the actual flow registered at the DI meters.

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 559.37 MI/d (it should be noted that there are variations between 559.37 and 559.39 as a result of rounding up and down of values) Distribution Input, with sources (NIW and PPP) as listed below, with associated DIs.

Company Total DI

Supply Source	Average DI (ML/d)
Altnahinch	8.26
Ballinrees	27.06
Belleek	1.71
Camlough	3.70
Carmony	18.97
Carran Hill WTW 2	5.92
Castor Bay	79.10
Caugh Hill	15.33
Clay Lake	3.77
Derg	14.59
Dorisland	24.18
Drumaroad Draper Hill	106.52

Supply Source	Average DI (ML/d)
Dungonnell	6.73
Dunore Point	97.07
Fofanny WTW	35.89
Forked Bridge	19.56
Glenhordial	3.95
Killyhevlin	23.55
Killylane	11.80
Lough Bradan	6.93
Lough Fea	10.95
Lough Macrory 2	9.86
Moyola	14.42
Rathlin Island	0.08
Seagahan WTW	9.47
Company Total AIR 13 DI	559.39

NIW Only DI

Altnahinch	8.26
Belleek	1.71
Camlough	3.70
Carmoney	18.97
Carran Hill WTW 2	5.92
Caugh Hill	15.33
Clay Lake	3.77
Derg	14.59
Dorisland	24.18
Drumaroad Draper Hill	106.52
Dungonnell	6.73
Fofanny WTW	35.89
Glenhordial	3.95
Killyhevlin	23.55
Killylane	11.80
Lough Bradan	6.93
Lough Fea	10.95
Lough Macrory 2	9.86
Rathlin Island	0.08
Seagahan WTW	9.47
NIW Only AIR 13 DI	322.16

PPP Only DI

Supply Source	Average DI (ML/d)
Ballinrees	27.06
Castor Bay	79.1
Dunore Point	116.63
Moyola	14.42

Supply Source	Average DI (ML/d)
PPP Only AIR 13 DI	237.21

Average Pumping Head – Line 5 – NIW Only/PPPOnly/NIW & PPP Only

The total NIW 'Total' AIR13 Average Pumping Head is 139.6 m.hd with a confidence grade of B4.

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. For AIR12 NIW had looked for alternative data sources, principally Telemetry, for updating and improved confidence. Data sourced from NIW telemetry system, Telemweb, had been included in the APH calculation for AIR12. For AIR13 the use of data from telemetry has continued to be used and has been expanded with approximately 21% of pumpset returns based on telemetry data.

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 21% of pumpsets returns based on telemetry data. This is in keeping with the Reporters view that given the good progress made in AIR12 with data from Telemetry being obtained, the rollout programme should continue. The Reporter also recommended that sites with a significant contribution to the pumping head calculation should be targeted (say flow x lift > 50m.h). Although pumpsets with individual >50m.h contribution have been returned for this year, pumpsets with less than 50m.h have also been included. A report has been set up to provide the telemetry data for identified pumpsets. The report was set up in the autumn 2012 with data only available from November. For AIR13 flow and lift data from telemetry is not representative of the whole reporting period but from November to March only. Going forward this report will provide returns for the whole reporting period for future returns.

For pumpsets with no telemetry data currently available, field test data and 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 / field test data remains the primary information source. South and South East areas were included in the Average Pumping Head calculation for AIR12, though the information was based on field test data. Calibrated network model data is now available and has been incorporated into AIR13 calculation.

Field Managers have identified installations where operational status has changed from AIR12. These are:-

- Corbally Rd, Ballylucas (out of service during AIR13 reporting year)
 - Magheraliskmisk-Stoneyford WPS (out of service during AIR13 reporting year)
 - Camcosy Rd (out of service during AIR13 reporting year)
 - Dresternan Rd, Rosslea (new installation)
 - Gortnalee (SR) (out of service during AIR13 reporting year)
- and have been removed from the calculation.

As these were in service for the majority of the reporting year they have been included in the calculation for AIR13.

In addition to the above a number of pumpsets have been identified that have been taken out of service during the reporting year. These are:-

- Galdanagh WPS (taken out of service late 2012)
- Slaughter Lane (taken out of service late 2012)
- Cabhan Aluinn (taken out of service late 2012)

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.

The table below indicates distribution pump data updates/changes from AIR12

Name	AIR12 Flow	AIR12 Lift	AIR13 Flow	AIR13 Lift	Source
Corbally Rd, Ballylucas	0.006	10.65	Not reported	Not reported	Field Manager
Magheraliskmisk-Stoneyford WPS	13	1.213	Not reported	Not reported	Field Manager
Camcosy Rd	0.058	40.434	Not reported	Not reported	Field Manager
Aghalislone	1.3	150.0	1.233	150.0	Telemweb (flow only)
Ballybarnes	.78	96.524	.803	96.524	Telemweb (flow only)
Mullaghdrin	0.36	65.594	0.223	65.594	Telemweb (flow only)
Ballybogie Rd WPS	0.01	84.4	0.042	84.4	Telemweb (flow only)
Carmony to Avish Hill WPS	5.1	102.0	3.486	102.0	Telemweb (flow only)
Creggan to Sherriffs WPS	0.2	112.2	0.163	112.2	Telemweb (flow only)
Creggan to Springhill WPS	0.2	35.1	0.966	35.1	Telemweb (flow only)
Dreen WPS	0.02	77.0	0.043	77.0	Telemweb (flow only)
Dunavenney WPS	0.093	58.949	0.073	58.949	Telemweb (flow only)
Ballyleighery WPS	0.04105	57.83	0.67	57.83	Telemweb
Brootally WPS	2.601	14.48	2.436	12.746	Telemweb
Carnbane	5.1671	35.9	3.624	35.90	Telemweb
Lisnasure WPS	0.305	21.52	0.311	21.52	Telemweb
Redhills WPS	.512	62.316	.517	58.021	Telemweb
Stonebridge WPS	0.674	48.445	0.656	48.45	Telemweb
Glenshane WBS	0.07	112.0	0.07	112.0	Telemweb (flow only)
Kilgort	0.06	63.0	0.101	63.0	Telemweb (flow only)
Tireighter	0.03	61.0	00.04	61.0	Telemweb (flow only)
Ballybracken (WPS)	0.377	73.391	0.271	73.391	Telemweb (flow only)
Greenhill (WPS)	0.04	30.2	0.061	30.2	Telemweb (flow only)
Crosskennan (WPS)	0.17	126.3	0.113	126.3	Telemweb (flow only)
Gleannan	0.03	55.6	0.03	55.6	Telemweb (lift only)
Mullinaskeagh	0.01	100.4	0.01	108.986	Telemweb (lift only)

Name	AIR12 Flow	AIR12 Lift	AIR13 Flow	AIR13 Lift	Source
Torr Rd	0.03	77.2	0.026	77.2	Telemweb (flow only)
Ballyknock	.911	82.548	.888	582.548	Telemweb (flow only)
Corvanaghan (WPS)	0.603	91.781	0.563	91.781	Telemweb (flow only)
Derrynoyd Lane	0.005	49.0	0.017	54.921	Telemweb (flow & lift)
Gortaclady (WPS)	0.166	53.924	0.196	53.924	Telemweb (flow only)
Gortreagh	1.031	76.584	1.315	76.584	Telemweb (flow only)
Killeeshil	0.3	65.0	0.382	65.0	Telemweb (flow only)
Sixtowns	0.039	62.496	0.051	62.496	Telemweb (flow only)
Aghavass	0.013	41	0.011	44	DZSC
Boho	0.119	80	0.059	86	DZSC
Boho	0.03	93	0.039	62	DZSC
Carran West	0.065	90	0.133	75	DZSC
Clabby	Not previously reported	Not previously report	0.033	61	DZSC
Derrylin	0.146	45	0.331	45	DZSC
Drumlisaleen		8	1.102	100	DZSC
Edenmore	Not previously reported	Not previously report	0.008	45	DZSC
Glen Road	Not previously reported	Not previously report	0.051	56	DZSC
Gortnalee (SR)	0.032	98	Not reported	Not reported	DZSC
Gortnalee (SR)	0.129	150	0.331	141	DZSC
Knockmore, Derrygonnelly	Not previously reported	Not previously report	0.003	248	DZSC
Larganacarran	0.006	88	0.009	83	DZSC
Marble Arch Low (SR)	0.803	26	.949	26	DZSC
Marble Arch Low (SR) HL	Not previously reported	Not previously report	2.551	67	DZSC
Marlbank	0.009	108	0.019	78	DZSC
Monea	0.107	60	0.201	68	DZSC
Moundrum	Not previously reported	Not previously report	0.036	49	DZSC
Sallygrove	Not previously reported	Not previously report	0.001	69	DZSC
Toneel	Not previously reported	Not previously report	0.006	44	DZSC
Tullyrossmearan	Not previously reported	Not previously report	0.019	102	DZSC
Tullyvogy	Not previously reported	Not previously report	0.005	75	DZSC
Aghindarragh	0.108	95	0.083	95	DZSC

Name	AIR12 Flow	AIR12 Lift	AIR13 Flow	AIR13 Lift	Source
Ballyscally	Not previously reported	Not previously report	0.029	50	DZSC
Brookborough	Not previously reported	Not previously report	0.07	92.0	DZSC
Cavey	Not previously reported	Not previously report	1.56	102.0	DZSC
Dresternan Rd, Rosslea	New Installation	New Installation	0.179	38.0	DZSC
Eshnadarragh	Not previously reported	Not previously report	0.004	65.0	DZSC
Glenchuil	0.158	115	0.151	115	DZSC
Half Moon Rd	Not previously reported	Not previously report	0.039	34.0	DZSC
Killany	Not previously reported	Not previously report	0.352	64.0	DZSC
Mullanvaum	Not previously reported	Not previously report	0.002	35.0	DZSC
Murley Cross Roads	Not previously reported	Not previously report	0.008	52.0	DZSC
Shanco	Not previously reported	Not previously report	0.041	18.0	DZSC
Shantonagh Rd	Not previously reported	Not previously report	0.003	37.0	DZSC
Tattinbar	0.801	75.0	0.633	90.0	DZSC
Tullyvar	0.344	94.0	0.277	90.0	DZSC
Dungonnell (WPS)	1.3	56.5	1.228	56.5	Telemweb (Flow only)
Cashty Rd East	0.036	54.723	0.035	54.723	Telemweb (Flow only)
Cranagh WPS	0.153	66.398	0.108	66.398	Telemweb (Flow only)
Drain	1.105	98.08	1.091	98.08	Telemweb (Flow only)
Foremass	.017	75.42	0.232	75.42	Telemweb (Flow only)
Pullytean	0.015	57.573	0.031	57.573	Telemweb (Flow only)
Radergan	0.617	95.269	0.746	95.269	Telemweb (Flow only)
Shanaghy	0.007	57.44	0.005	57.44	Telemweb (Flow only)
Syonfin	1.109	105.515	0.956	105.515	Telemweb (Flow only)

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,
- NIW Total Flow Calculations for WTW in NI.

For AIR12 a pressure gauge reading of 9 bar was used to represent the lift for the pumped outlet from Drumaroad to North Down/Belfast. The Reporter raised concerns over the accuracy of this figure due to the significance that Drumaroad has on the overall calculated figure and recommended further investigations to validate the lift figure. To address this, arrangements were initiated to have the pressure readings on the pumped outlets from Drumaroad connected to telemetry to provide on-going pumped pressure data. Unfortunately it has been unable to have the pressure points connected permanently to telemetry for AIR13. Pressure transducers have been installed with data collected via a data logger for an 11 day period to provide an indication of lift for both the pumped outlets from Drumaroad. It is hoped the pressure points will be connected permanently to telemetry for AIR14.

Drumaroad output increased over the year especially during the second half of the reporting year. Water Supply has indicated output increased due to cost as treated water from Drumaroad was cheaper to produce than Dunore water. This has resulted in an increase of 10MI/d for the North Down/Belfast pumped outlet for AIR13.

Drumaroad pumped outlet to South Down/Newcastle has reduced by approximately 5MI/d. Although the South Down outlet is not metered, the pumped flow has been obtained from subtracting the North Down/Belfast pumped flow from the total Drumaroad output. The South Down/Newcastle & North Down/Belfast are the only outlets from Drumaroad. Past returns for South Down/Newcastle flows had been based on information provided by site personnel.

The table below lists updates/changes to Supply pump data from AIR12

Name	AIR12 Flow	AIR12 Lift	AIR13 Flow	AIR13 Lift	Source
Rathlin	0.07	90	0.08	90	Leakage Section
Lough Ross	6.29	81	5.92	81	Leakage Section
Carronhill interstage	6.29	4	5.92	4	Flow altered to reflect Leakage Sections return for Carron Hill output.
Carronhill Transfer Pumps	6.29	5	5.92	5	Flow altered to reflect Leakage Sections return for Carron Hill output.
Fofanny/Crocknafolia	6.72	131	6.532	131	Telemweb (Flow only)
Drumaroad WTW To Break Pressure Tank to North Down / Belfast	86.4	91.79	96.44	61.29	Telemweb (Flow only) Lift (data logger)
Drumaroad WTW to Command SR to South Down / Newcastle	15	25	10.08	30.54	Telemweb (Flow only) Lift (Data logger)
Killyhevlin WTW to Cavancross	3.5	153.0	4.21	150.0	DZSC
Killyhevlin WTW to	2.43	112.2	1.169	53.0	DZSC

Name	AIR12 Flow	AIR12 Lift	AIR13 Flow	AIR13 Lift	Source
Crawfords Hill					
Killyhevin WTW to Derrykeegan	5.85	81.6	4.335	72.0	DZSC
Killyhevin WTW to Tattinbar	8.64	153.0	9.0	157.0	DZSC
Killyhevin WTW to Marble Arch Low	4.47	71.2	3.482	43.0	DZSC
Belleek-Rathmore HL	2.2	40.8	1.578	37.0	DZSC

Distribution Input

The DI, of 559.39 MI/d figure has been provided by the Company's Leakage Section

Distribution Input used in Average Pumping Head Calculation

	Total DI	DI Used in Calculation	DI Used in APH Calculation as % of Total
2008 Return	616.575	284.459	46.14%
2009 Return	633	420.93	66.5
2010 Return	625.4	609.62	97.48
2011 Return	627.5	627.5	100
2012 Return	585.09	585.09	100
2013 Return	559.39	559.37	100

The above table details DI used in the calculation for this and previous years return.

PPP Pump Data in Master Pump Table

Flow and lift information has been provided by the PPP Concessionaire.

For AIR12 the Reporter commented on the good work in providing pressure transducers to provide readings on high level outlets from PPP sites. This approach has continued for AIR13 with pressure transducers providing lift data for high lift pumps. Where no pressure gauges were installed (low lift & interstage pumping) AIR12 lift figures have been used.

The table below lists updates/changes to PPP pump data from AIR12

Name	AIR12 Flow	AIR12 Lift	AIR13 Flow	AIR13 Lift	Source
Crewe Hill	2	87	2.5	87	PPP
Castor Bay LL	109	24	103.4	24	PPP
Castor Bay Interstage 1	109	7.3	103.4	7.3	PPP
Castor Bay Interstage 2	109	10.8	103.4	10.8	PPP
Castor Bay HL-B'dougan	74	88	69.8	88	PPP
Castor Bay HL-M'liskmisk	10	147	9.1	147	PPP
Castor Bay to Forked Bridge	21	125	19.6	125	PPP
Moyola-interstage	15	10	14.2	10	PPP
Moyola WTW-Mullaghboy	15	120	14.2	120	PPP
Reservoir to Moyola	15	16	14.2	16	PPP
Dunore LL	119	47	102	47	PPP
Dunore Interstage 1	119	3.2	97	3.2	PPP
Dunore Interstage 2	119	8.4	97	8.4	PPP
Dunore HL	113	140	97	113	PPP
Ballinree LL (R Bann)	14	149	17.2	149	PPP
Ballinrees LL (Dam)	0	4.8	0	4.8	PPP
Ballinrees Interstage	13	12.4	14.9	12.4	PPP
Moy's WPS	3	117	6.3	117	PPP

Identified Anomalies

A number of duplications here identified for AIR12. Following his review of AIR12 APH submission, the Reporter raised a number of queries. As a result, one additional duplication was identified (Derg-Tullywhisker) which was contributing to the overall calculation. Three pumpsets at Alcrossagh were also included but should have been removed as they were no longer in service. These pumpsets have also been removed from the AIR13 calculation.

With the Reporter identifying duplication, a follow-up review of possible duplications was carried out for AIR13. Duplication of pumpsets which were identified are as follows:

- Dungonnell –Parkmore
- Clay Lake/Man o War
- Clay Lake/Drumbunion

These pumpsets have also been removed from the AIR13 calculation.

As of last year the error has occurred around high level pumps at treatment works where final water pumps were included in a DZS study and the duplication was not identified.

As supply data has been based on site readings, record drawings, etc., the data from the DZS model has been used in the calculation.

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 AIR13 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 127.7m.hd and 156.12m.hd respectively. The PPP Only value of 156.12m.hd 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 m calculated for PPP only is more in relation to the Pumping Head within the works.

However the NIAUR AIR13 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 following table compares the Average Pumping Head values listed in AIR12 and AIR13 for NIW Only, PPP Only and NIW and PPP.

	APH-Total (m.hd)	APH-NIW Only (m.hd)	APH-PPP Only (m.hd)
AIR12	155.9	156.5	155.1
AIR13	139.6	127.7	156.12

The decrease in the Average Pumping Head from AIR12 can be attributed mainly to three changes:

1. The PPP contribution has decreased by 7.3m which is primarily due to the reduction in output from Dunore.
2. NIW Supply contribution has also decreased, by approximately 3.48m, primarily due to the revised HL lift data.
3. The removal of duplicated pumpsets has resulted in a 3.03m reduction.

There has been a minimal increase of 1 m.hd in the PPP Only APH, despite the reduction in output from Dunore as mentioned above. The AIR13 PPP only DI has reduced by 21.4MI/d from AIR12, with the corresponding individual pumpsets contribution reducing also. When these reductions are inputted into the PPP only calculation, ratio wise the AIR13 PPP Only APH has remained similar to AIR12, with the reduction PPP has contributed to the total APH calculated figure not being demonstrated.

There has been a significant decrease in the NIW only APH which is primarily due to the changes from NIW Water Supply contribution and the removal of duplicated pumpsets as mentioned above. The AIR13 NIW only DI has changed relatively little from AIR12 with a decrease of 5.09MI/d which in turn would tend to exaggerate any reduced contribution from individual pumpsets when inputted in the NIW Only calculation.

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 AIR13 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 127.7m.hd and 156.12m.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 November 2012. Flow & lift data obtained from telemetry is representative from November 2012 to March 2013 and not the total reporting period. For future returns this report will provide information representative of 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.

Confidence Grade

Distribution pump data has been taken from available calibrated network models, therefore, confidence in the data obtained is reasonably good; **B4**. Calibrated network models represent the best source of distribution pump data currently available.

Water Resource and Treatment pump data has been taken from a variety of sources:

- TDMS (various periods of analysis based on staff supplying data); **C4**.
- Direct readings from pumps by site staff (care must be taken as snap shot may not be fully representative of average day figures); **B4**.
- Record drawings / Site Staff Experience (head calculated as difference in pipe invert levels on drawings); **B4**
- Distribution Input data obtained from NI Water Ltd personnel; **B2**.

When the supply and distribution data source confidence grades are combined for the Average Pumping Head Calculation, the overall confidence grade is **B4**, given the variety of sources and periods of data used.

Improvements from AIR12

As recommended by the Reporter following AIR12, the use of telemetry as an information source has continued. In AIR12 6 sites were returned using telemetry

data. For AIR13 45 sites now been returned with telemetry data though this mainly relates to flow.

Future Improvements

Data taken from record drawings / site supervision staff regarding pump lift for high and low lift pumps in WTW's could be improved if pressure gauges were available upstream and downstream of the pumps and could be recorded via TDMS.

The process of obtaining data from Telemweb should be continued. It should be noted that data from Telemweb may be limited, in particular to mean lift. The use of Telemweb data will update aging DZS data and capture leakage reduction and network changes subsequent to the field test. It will also help bring the pumped flow total in line with the DI figure for the reporting year. Better understanding of information available from telemetry and how best to interrogate Telemweb is needed. Discussions with Telemetry Section on how this can be best achieved are on-going.

Recommendations for Future Returns

- Continue the rollout programme of obtaining data from telemetry as indicated in Future Improvements above.
- With the identification of duplication for AIR12, the Reporter asked if there are unique asset identifiers to reduce duplication and potential errors. The vast majority of pumpsets have unique CAR identifiers. Duplication has occurred with HL pumps at WTWs. In the past pumpsets within WTWs were included under the site facility ID, i.e. as part of the works and not identified separately. Some have now been identified separately and with the Asset Data Acquisition Improvements (ADAI) project ongoing the possibility of duplication should reduce further. To help reduce potential error occurring further for AIR14 it is planned to introduce a column to each pumpset which will detail where it pumps from and to i.e. North Rd SR to Beltoy SR. This will provide a further check for possible duplication. Also this will provide a check on data being returned. This will enable the identification of pumps in series from source to tap and allow possible out of since data to be highlighted.

Average Pumping Head Result Comparison from 2008 to 2012

	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

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 AIR11 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.

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)

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.

Ballinrees WTWs is supplied by Ballinrees IR, which in turn is supplied mainly by Altikeeragh IR (57.534% - during AIR13) and the River Bann (42.466%-during AIR13).

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.

Lines 6-10 Column 1 only – Types of Treatment by Proportion (PPP)

No changes to the PPP types of treatment over the reporting period.

Lines 6-10 Column 2 only – Total number of Units referred to Type (PPP)

No changes to the PPP types of treatment over the reporting period.

Lines 13 – Potable Mains (PPP)

No changes to the length of Potable Mains operated by the PPP Contractor over the reporting period.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 13 NON FINANCIAL MEASURES
SEWERAGE PROPERTIES & POPULATION (TOTAL)**

DESCRIPTION	UNITS	DP	1		2		3		4		5		6		
			REPORTING YEAR 2007-08	CG	REPORTING YEAR 2008-09	CG	REPORTING YEAR 2009-10	CG	REPORTING YEAR 2010-11	CG	REPORTING YEAR 2011-12	CG	REPORTING YEAR 2012-13	CG	
A PROPERTIES															
1	Households properties connected during the year	000	3	6.380	C4	7.447	C3	3.493	C3	3.938	B3	3.001	B2	3.455	B2
2	Non-households properties connected during the year	000	3	1.319	B3	0.723	C3	0.167	C3	0.224	B3	0.236	B2	0.123	B2
B BILLING															
3	Households billed unmeasured sewage	000	3	533.506	C4	564.052	C3	568.886	C3	574.400	C2	580.815	A2	586.127	A2
4	Households billed measured sewage	000	3	25.616	C4	0.000	C3	0.000	C3	0.000	A1	0.000	A1	0.000	A1
5	Households billed sewage	000	3	559.122	C4	564.052	C3	568.886	C3	574.400	C2	580.815	A2	586.127	A2
6	Non-households billed unmeasured sewage	000	3	30.638	B2	27.881	C3	13.635	C3	11.496	B3	10.109	A2	9.250	A2
7	Non-households billed measured sewage	000	3	38.002	B2	32.063	C3	22.067	C3	22.374	B2	22.622	A2	23.014	A2
8	Non-households billed sewage	000	3	68.640	B2	59.944	C3	35.702	C3	33.870	B3	32.731	A2	32.250	A2
9	Void properties	000	3	38.357	C4	39.469	C3	41.508	C3	42.988	B3	44.605	A2	44.637	A2
C POPULATION															
10	Total connected population	000	3	1495.054	C4	1423.480	C4	1453.610	C4	1459.467	B3	1476.185	B3	1512.024	B3

Table 13 – Sewerage Properties and Population

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 was deferred in April 2007 and has not been implemented since. There are no apparent plans for charges to be implemented during 2013/14. 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 AIR13. 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.

As per Reporter Recommendation Interim Principal Statement below – reports have been completed and having identified data issues, NI Water is currently reviewing the process by which the water and sewerage status are updated on Rapid.

NI Water considers how it will confirm that properties recorded as not connected to the water and/or sewerage service are truly not connected.

NI Water reconciles its records of properties with septic tanks with properties billed for water and/or sewerage services which would allow properties with a septic tank not billed for water to be identified and investigated.

There has been further significant focus on customer numbers during 2012/13, primarily due to commitments within PC10/Final Determination submissions and NIW Undertakings. As a result, there have been considerable data shifts from AIR12, most notably in the reclassification of test meters, upload of domestic metered properties and in unmeasured non-domestic numbers.

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 2012/13 from circa 9,550 in March 2012 to circa 8,900 in March 2013. This shows a reduction of circa 650 in year.

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 (End March 2013) period for both leakage/water balance calculation and tariff setting/charging.

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 and reconciled (where possible) with other data collection activities, such as the metering programme and the Diamond reporting database. 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. 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 595 (gross) 'unmeasured – not charged' properties which (based on sample taken) are mostly NI Water premises as per table below.

Unmeasured - Not Charged Properties	Count
NI Water	548
Fire Authority for NI	13
Other	31
No Occupier	3
Grand Total	595

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

Test Meters

NIW previously had significant number of meters classified as 'test' from its legacy databases, which have been cleansed and reclassified as part of our Data Quality Programme.

The Data Quality project finished in March 12, with the last batch of bills from the project released in June 12. Any follow up work required will now be completed in BAU. The results of the test meters review is detailed below:

Test Meter Classification	Count
Commercial	2720
Domestic	5819
NIW	228
Remove	107
Disconnected	174
RFR – Unable to Locate*	480
RFR – Reads*	1155
RFR – Shared Supply*	77
RFR – Compensation Supply*	14
RFR – No billable name / address*	85
Total	10859

Test Meters – Final Review	Count
Resurveys/surveys remaining	39
Total	39

* RFR= Retain for (further) Review

In summary, of the total 10,898 test meters:-

- 10,859 have been classified
- 39 still to have a classification confirmed and are outstanding with the contractor

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.

The Rapid Property Summary for 31st March 2013 indicates a reduction of circa 1000 non-domestic test meters and 550 domestic test meters during 2012/13 for sewerage services, as a result of our Data Quality programme.

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 test meters are no longer included in Table 13 non-domestic property counts (although NIW still retain this information for customer record and charging purposes). However, there are 432 occupied domestic properties classified as site meters and these will require further investigation and analysis to be completed during 2012/13 to ensure these are classified correctly.

The number of non-domestic site meters has increased by 8 during 2012/13.

Confidence Grades

We have kept the confidence grades consistent with those of AIR12. 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. Within Line 10 there was a slight change in methodology – the non-resident population was included, as per reporting requirements. Last year we introduced an automated tool to populate the figures within Table 13 from the Rapid Property Summary – we continued with this method for AIR13.

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		5		6	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG	2012-13	CG
A SEWAGE - VOLUMES														
1 Volume unmeasured household sewage	MI/d	2	244.67	B3	257.99	C3	256.26	C3	261.62	C3	246.17	A2	243.14	A2
2 Volume unmeasured non-household sewage	MI/d	2	20.70	B4	18.05	C3	9.19	C3	7.23	C3	6.10	A2	5.53	A2
3 Volume unmeasured sewage	MI/d	2	265.37	B4	276.04	C3	265.45	C3	268.85	C3	252.27	A2	248.67	A2
4 Volume measured household domestic sewage	MI/d	2	11.78	C3	0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1
5 Volume measured non - household domestic sewage	MI/d	2	79.17	C3	53.34	B3	49.38	B3	39.16	B3	36.56	B3	35.90	B3
6 Volume trade effluent (excluding Roads Drainage)	MI/d	2	26.25	C3	18.44	C4	28.37	B2	20.18	B2	36.39	B2	34.12	B2
7 Volume waste water returned	MI/d	2	382.57	C3	347.82	B4	343.20	C3	328.19	C3	325.22	B3	318.69	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 AIR13 volume reported for unmeasured household sewage is 243.14 MI/d. The volume reported in AIR12 was 246.17 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 AIR13 is 6.87 MI/d. The value reported in AIR12 was 7.56 MI/d.

The AIR13 volume reported for unmeasured non-household sewage is 5.53 MI/d. The volume reported in AIR12 was 6.10 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 12 to March 13. The discharge volumetric information was derived directly from;

- The monthly 'Reconciling' Reports Apr12-Mar13 - detailing actual billed sewerage discharge M³.
- The DRD Domestic Allowance Subsidy Assurance Report Apr12 – Mar13 – detailing actual domestic sewerage allowance applied per bills.
- Monthly FN12 Transaction Reports Apr12 – Mar13 – detailing Bad Debt Write-Off by Charge Type.

The calculated sewerage discharge volume was 13,104,649 M³ converted to mega litres per day of 35.90 MI/d.

Sewerage volume is lower than last year due to;

- Continued economic downturn
- Initial transfer of Hospitals discharge from Sewerage to Trade Effluent actioned In-Year.

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.

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, on the small number of traders were used.

AIR 12 Volume = 31.15 MI/day

AIR 13 Volume = 34.12 MI/day

This represents an increase of 9.5%. However, due to a miscalculation, the volume attributed to the incinerator for AIR12 should have been recorded as 19.49MI/day as opposed to 14.26MI/day. This would have resulted in the overall volume equating to 36.39 MI/day for AIR12 (as opposed to the reported volume of 31.15 MI/day). In effect there is a reduction in volume of 6.2% (equating to 2.27 MI/day). The miscalculation resulted from a monthly discharge volume figure been taken as a meter reading, this gave a much lower annual discharge volume for the W1A Trade Effluent Discharge (20333m³ instead of 1931064m³).

This reduction of 2.27 MI/day was predominantly due to the decrease in the incinerator volume from 19.49 MI/day to 17.43 MI/day (a decrease of 2.06 MI/day).

It should be noted that the volume from the incinerator accounts for 51% of the total trade effluent volume.

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		5		6		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG	2012-13	CG	
A SEWAGE - LOADS															
1	Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1			4,484.0	C4	3,086.5	B2	2,783.3	B2	4,255.6	B2	3,778.6	B2
2	Total load receiving secondary treatment (BOD/year)	tonnes	1			45,024.1	C3	39,716.5	C3	38,541.8	C3	38,366.4	C3	39,183.9	C3
3	Total load receiving primary treatment only (BOD/year)	tonnes	1			377.8	C3	199.4	C3	184.1	C3	193.9	C3	286.6	C3
4	Total load receiving preliminary treatment only (BOD/year)	tonnes	1			473.2	C3	553.7	C3	553.5	C3	668.4	C3	691.5	C3
5	Total load entering sewerage system (BOD/year)	tonnes	1			46,431.4	C5	40,931.0	C5	39,680.5	C5	39,504.1	C5	40,312.8	C5
6	Equivalent population served (resident)	000	2			2,088.64	C5	1,837.56	C5	1,778.08	C5	1,769.98	C5	1,806.82	C5
7	Equivalent population served (resident) (numerical consents)	000	2			2,024.99	C5	1,783.03	C5	1,718.57	C5	1,708.58	C5	1,742.90	C5
B SEWERAGE - SERVICE FACILITIES															
8	Number of sewage treatment works	nr	0			1,056	A2	1,040	A2	1,028	A2	1,023	A2	1,018	A2
9	Treatment capacity available (BOD5/day)	tonnes	1			133.9	D3	126.3	D3	127.0	D3	129.2	D3	132.4	D3
C SEWAGE - SLUDGE DISPOSAL															
14	Percentage unsatisfactory sludge disposal	%	2			0.00	A1	0.00	A1	0.00	A1	0.00	A1	0.00	A1
15	Total sewage sludge produced	ttds	1			38.0	B3	30.5	B2	30.5	B2	31.4	B2	32.0	B2
16	Total sewage sludge transferred to PPP	ttds	1			38.0	B3	36.9	B2	29.9	B2	30.7	A2	31.3	A2
17	Total sewage sludge disposal by NI Water	ttds	1							0.6	B2	0.7	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		5		6		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG	2012-13	CG	
A SEWAGE - LOADS															
1	Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1	N/C		N/C		879.3	B2	1,058.1	B2	1,124.6	B2	1,040.6	B2
2	Total load receiving secondary treatment (BOD/year)	tonnes	1	1,880.0		3,331.0	A2	8105.2	B3	7,396.5	B3	7,834.5	B3	6,594.9	B3
3	Total load receiving primary treatment only (BOD/year)	tonnes	1	0.0		0.0	A1	0.0	A1	0.0	A1	0.0	A1	0.0	A1
4	Total load receiving preliminary treatment only (BOD/year)	tonnes	1	0.0		663.0	B5	0.0	A1	0.0	A1	0.0	A1	0.0	A1
5	Total load entering sewerage system (BOD/year)	tonnes	1					N/A	A1	7,396.5	B3	7,834.5	C5	6,594.9	C5
6	Equivalent population served (resident)	000	2	78.00		152.00	A2	370.10	B3	337.74	B3	356.76	B2	301.14	B2
7	Equivalent population served (resident) (numerical consents)	000	2			152.00	A2	370.10	B3	337.74	B3	356.76	B2	301.14	B2
B SEWERAGE - SERVICE FACILITIES															
8	Number of sewage treatment works	nr	0	1		2	A1	6	A1	6	A1	6	A1	6	A1
9	Treatment capacity available (BOD5/day)	tonnes	1	12.4		17.5	B4	30.4	B3	30.4	B3	30.4	B3	30.4	B3
C SEWAGE - SLUDGE DISPOSAL															
14	Percentage unsatisfactory sludge disposal	%	2	0.00				0.00	A1	0.00	A2	0.00	A1	0.00	A2
15	Total sewage sludge produced	ttds	1	0.8				7.4	B3	7.6	B3	7.6	B3	6.3	B2
16	Total sewage sludge received from NI Water	ttds	1	0.8				1.0	B3	29.9	B3	30.7	A2	31.3	A2
17	Total sewage sludge disposal	ttds	1							37.5	B3	38.3	B2	37.6	B2

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		5		6		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG	2012-13	CG	
A SEWAGE - LOADS															
1	Trade effluent load receiving secondary treatment (BOD/year)	tonnes	1	4,919.9	C3	4,484.0	C4	3,965.8	B2	3,841.4	B2	5,380.2	B2	4,819.2	B2
2	Total load receiving secondary treatment (BOD/year)	tonnes	1	43,690.2	C3	48,355.1	C3	47,822.0	C3	45,938.3	C3	46,200.9	C3	45,778.8	C3
3	Total load receiving primary treatment only (BOD/year)	tonnes	1	482.3	C3	377.8	C3	199.4	C3	184.1	C3	193.9	C3	286.6	C3
4	Total load receiving preliminary treatment only (BOD/year)	tonnes	1	444.1	C3	1,136.2	C5	553.7	C3	553.5	C3	668.4	C3	691.5	C3
5	Total load entering sewerage system (BOD/year)	tonnes	1	46,877.0	C3	46,431.4	C5	40,931.1	C5	47,076.9	C5	47,338.6	C5	46,907.7	C5
6	Equivalent population served (resident)	000	2	2,120.90	C3	2,240.64	C5	2,207.66	C5	2,115.82	C5	2,126.74	C5	2,107.96	C5
7	Equivalent population served (resident) (numerical consents)	000	2	2,054.70	C3	2,176.99	C5	2,153.13	C5	2,056.31	C5	2,065.34	C5	2,044.04	C5
B SEWERAGE - SERVICE FACILITIES															
8	Number of sewage treatment works	nr	0	1058	A2	1058	A2	1046	A2	1034	A2	1,029	A2	1,024	A2
9	Treatment capacity available (BOD5/day)	tonnes	1	132.1	D3	151.4	D4	156.7	D3	157.4	D3	159.6	D3	162.8	D3
C SEWAGE - SLUDGE DISPOSAL															
14	Percentage unsatisfactory sludge disposal	%	2	0.00	A1	0.00	A1	0.00	A1	0.00	A2	0.00	A1	0.00	A2
15	Total sewage sludge produced	ttds	1	38.4	B2	38.0	B3	37.9	B3	38.1	B3	39.0	B2	38.4	B2
16	Not used	ttds	1												
17	Total sewage sludge disposal	ttds	1	38.4	B2	38.0	B3	37.9	B3	38.1	B3	39.0	B2	38.4	B3

Table 15 - Sewage Treatment

Line 1 - Trade effluent load receiving secondary treatment (BOD/year)

The loading for AIR13 was 4819.21 tonnes/year compared to 5357.2 tonnes/year for AIR12. This represents a 10% decrease in the loading.

Even due to a miscalculation of the incinerator volume in AIR12, there was no real difference in overall BOD loading (revised 5380 tonnes/year v reported 5357 tonnes/year).

The 10% reduction of 561 tonnes/year (5380-4819) was predominantly due to a reduction in the incinerator loading of 542 tonnes/year (1952-1410). The remaining 19 tonnes/year can be attributed to the following factors.

1. A number of traders installing treatment to reduce strength, for example, [REDACTED] reducing from 46.58 tonnes/year to 2.82 tonnes/year and [REDACTED] reducing from 499.51 tonnes/year to 172.24 tonnes/year.
2. A number of traders closing, for example, [REDACTED] [REDACTED] which together contributed 82.53 tonnes/year.

The above decrease of 453.56 tonnes in loading was offset by the following increases:

1. The addition of new traders, for example, [REDACTED] [REDACTED] which contributed to an increase of 62.91 tonnes/year.
2. Increase in loading at [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] which contributed 373.1 tonnes/year. **Total increase of 436.01 tonnes.**

The above changes account for 17.5 of the 19 tonnes/year.

It should be noted that the BOD loading from the incinerator accounts for 29% of the total trade effluent BOD loading.

Lines 2 - 9 – Loads and Service facilities

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 AIR12 PEs for 132 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 AIR12, 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 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 were 7% and 32.6% respectively of hospital discharges have been included. However the AIR11 Trade Information, for these nursing homes and clinics, has been maintained for AIR13 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 the AIR12 commentary it was reported that for the first time Trade Effluent Section depicted trade effluent from the incinerator to Belfast WWTWs, this equates to 64422Pe for AIR13. At this time Asset Performance Team (APT) liaised with the Operational Staff, OTST and the Process Scientist in an attempt to understand the true value of loading on Belfast WWTWs. Although flow and load measurement had been ongoing at Belfast WWTWs this information was portraying widely differing values, which had not been validated by the Operational or OTST staff. Therefore it was agreed at this time that the Belfast WWTWs AIR12 theoretical PE, (354,507 at the time), computed by APT, should be used as the Operational staff were of the opinion that the Incinerator's trade effluent was reflected in this figure. However since this date the Flow & Load information was validated and a figure of 365,000Pe has been agreed for AIR13.

NIW has information pertaining to Septic Tank Imports to its WWTWs. In summary of the 16 WWTWs which receive Septic Tank Imports, the latter is discharged at the head of the Inlet Works at 4 of the WWTWs, with Lisburn (New Holland) being an addition since AIR12. The Septic Tank Imports are discharged to the Sludge Reception Centres at the other 12 WWTWs. For AIR13 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 AIR12 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, due to the heavy workload on the Flow & Load section, these checks have not taken place. Flow & Loads were required at all WWTWs identified for upgrade during PC15 and the checks on the supernatant return meters will occur once this work is complete. It is envisaged that this work will begin within the next 6 months.

The only works where this sludge was discharged at the head of the works was at 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 m3/Yr	PE Calculation			
			Total Volume m3/day	SS Loading (Assume 1% Dry Solids) m3/day	SS Loading kg/day	PE (SS/0.06)
Belfast	345	728.572	2.00	0.02	19.96	333
Glenstall	1109	6943.737	19.02	0.19	190.24	3171
Limavady	3162	32.246	0.09	0.00	0.88	15
Lisburn (New Holland)	329	7756.333	21.25	0.21	212.50	3542

NIW has also information pertaining to Sludge Imports to its WWTWs. 16 WWTWs have received Sludge Imports during the AIR13 period, with 2 WWTWs being used as sludge holding centres, 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, and it appears that these meters would require verification and perhaps calibration, no allowance is being made for PE resulting from Sludge Imports as these works.

It was reported in AIR12 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 WWTWs. However, due to the heavy workload on the Flow & Load section, these checks have not taken place. Flow & Loads were required at all WWTWs identified for upgrade during PC15 and the checks on the supernatant return meters will occur once this work is complete. It is envisaged that this work will be able to begin within the next 6 months.

The Reporters Report on AIR09 recommended that NIW correct possible overestimation of total STW 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 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	1245347	27273.09
Non-Residential	238454	5222.14
Hotels	3514	76.95
Nursery School	1011	22.14
Playschool	1071	23.45

Components used in build up of Total Load	Total PE	000 tonnes of BOD per annum
Primary School	26253	574.94
Secondary School	24114	528.1
Trade PE	124540	2727.43
Large (>7500m ³) Consumers	121788	2667.16
Caravan Parks	30428	666.37
Sludge Import / Export	24216	530.33
Total (Line 5)	1840736	40312.75

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 AIR12, 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 F&L 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 8 Load & Studies and these have been included in the AIR13 PE information.

The confidence grades for the actual loadings at 33 WWTWs (reviewed by the F&L 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 33 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 AIR12, due to the confidence in the other information associated with the population of these lines.

Line 2 - Total load receiving secondary treatment

The table below shows the changes in WWTWs receiving secondary treatment since AIR12 for Line 2. NB. Change in PE (-Ve AIR13 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Acton	S02111	21	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Aghagallon	S02393	14	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Aghalee	S02394	94	
Aghanloo (1)	S02989	-145	
Annacloy (WWTW)	S00292	-109	

Name of Works	CAR ID	PE Change	Comments
Annsborough	S02687	43	PE Updated with latest AIR13 Trade Information
Antrim (WWTW)	S01422	-465	
Armoy (WWTW)	S01172	85	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Ballyavelin Road (133-135)	S04123	12	It was confirmed that WWTWs is a Private WWTWs
Ballybogie Road(7-9)	S04875	6	It was confirmed that this WWTWs now gravitates to Culmore
Ballycarry	S00267	-362	PE Updated with latest AIR13 Trade Information
Ballyclare	S01467	1660	A population appraisal was carried out at this site and following an APT review, including update with latest AIR13 Trade Information, this was adopted for AIR13
Ballykelly (L/Derry)	S03016	-8	PE Updated with latest AIR13 Trade Information
Ballykinler (WWTW)	S00299	1	
Ballymena (WWTW)	S01456	-2469	
Ballynadolly	S00327	-3	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Ballynahinch (Down)	S00311	2	PE Updated with latest AIR13 Trade Information
Banbridge (WWTW)	S02102	300	A Flow & Load was carried out at this site and following an APT review was adopted for AIR13
Belfast (WWTW)	S00345	-10493	
Bushmills (WWTW)	S01178	6	PE Updated with latest AIR13 Trade Information
Capecastle	S01179	8	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Carrickfergus (WWTW)	S00261	3	PE Updated with latest AIR13 Trade Information
Castledawson	S01609	1305	This WWTWs is now a pumpaway to Magherafelt
Castlederg (WWTW)	S03042	-3	PE updated with latest AIR13 Trade Information
Clanabogan South WwTW	S05568	-18	It was confirmed that this WWTWs was adopted by NIW for AIR13
Coalisland	S02828	52	PE updated with latest AIR13 Trade Information

Name of Works	CAR ID	PE Change	Comments
Cookstown (WWTW)	S01582	-136	PE Updated with latest AIR13 Trade Information
Cross Lane 9-22 ST	S05572	-25	This WWTWs replaced an existing WWTWs - Cross lane (9-22) under RWIP
Cross Lane(9-22)	S02427	25	This WWTWs was replaced by a New WWTWs - Cross lane 9-22 ST (SO5572)
Culmore (WWTW)	S03071	-2366	It was confirmed that Ballybogie Rd now gravitates to Culmore and also PE updated with latest AIR13 Trade Information
Derryhale	S02570	3	PE updated with latest AIR13 Trade Information
Dervock (WWTW)	S01102	20	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Desertmartin	S01614	-19	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Diviny	S02403	19	This WWTWs was replaced by a new WWTWs - Diviny New ST
Diviny NEW ST	S05546	-19	This WWTWs replaced an existing WWTWs - Diviny under RWIP
Donaghmore (WWTW)	S02840	-378	A population appraisal was carried out at this site and following an APT review, including update with latest AIR13 Trade Information, this was adopted for AIR13
Donemana	S03103	31	PE Updated with latest AIR13 Trade Information
Donnybrewer	S03080	73	PE Updated with latest AIR13 Trade Information
Dorsy	S02267	-20	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Downpatrick (WWTW)	S00771	100	PE Updated with latest AIR13 Trade Information
Draperstown	S01615	21	
Dromara (WWTW)	S00316	-1	
Dromore (Down)	S02127	138	A Flow & Load was carried out at this site and following an APT review was adopted for AIR13
Dromore Highlands	S03085	10	A population appraisal was carried out at this site and following an APT review was adopted for AIR13

Name of Works	CAR ID	PE Change	Comments
Dungannon	S02850	-26623	A Flow & Load was carried out at this site and following an APT review was adopted for AIR13
Dungiven	S03101	18	PE Updated with latest AIR13 Trade Information
Dunloy	S01108	178	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Dunmurry	S00346	-90	PE Updated with latest AIR13 Trade Information
Enniskillen	S03218	-1047	
Fivemiletown (WWTW)	S03113	496	
Forkhill	S02270	-1038	It was confirmed that Mullaghbane (Forkhill) now pumps to this site
Garrison (WWTW)	S03115	195	An on-site count was carried out by APT and adopted for AIR13
Garvetagh	S03117	15	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Gilford (WWTW)	S02162	33	PE Updated with latest AIR13 Trade Information
Glenstall	S01109	811	
Gortin (Tyrone)	S03124	25	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Gortscreagan	S03127	13	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Grange (Taylorstown)	S01442	-14	
Greencastle (Tyrone)	S03132	51	
Greenisland (WWTW)	S00263	-18	PE Updated with latest AIR13 Trade Information
Greyabbey (WWTW)	S00214	187	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Greysteel (WWTW)	S03123	-15	PE Updated with latest AIR13 Trade Information
Hilltown (WWTW)	S02701	3	
Irvinestown	S03137	538	A Flow & Load was carried out at this site and following an APT review was adopted for AIR13
Kilkeel (WWTW)	S00313	270	PE Updated with latest AIR13 Trade Information
Killinchy (WWTW)	S00252	-2889	

Name of Works	CAR ID	PE Change	Comments
Killyleagh (WWTW)	S00273	484	
Kilrea	S01156	-20	
Kilskeery	S03148	31	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Kircubbin (WWTW)	S04881	337	A population Report was carried out by McAdam Design Consultants in 2013 and this was amended with the latest occupancy rates and adopted for AIR13
Larne (WWTW)	S02044	-149	PE Updated with latest AIR13 Trade Information
Leitrim (New)	S02705	-32	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Limavady (WWTW)	S03162	475	PE updated with latest AIR13 Trade Information
Lisburn (New Holland)	S00329	-1485	PE Updated with latest AIR13 Trade Information
Lisnaskea (WWTW)	S03171	34	
Lisowan	S00287	1	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Lough Macrory (WWTW)	S03174	-45	
Loughguile	S01115	-4	
Maghaberry	S02412	3288	
Maghera (L/Derry)	S01629	7	PE updated with latest AIR13 Trade Information
Magherafelt (WWTW)	S01621	-1259	It was confirmed that Castledawson WWTWs now pumps to this site and PE was also updated with latest AIR13 Trade Effluent PE
Magheramaso n	S03177	2	PE Updated with latest AIR13 Trade Information
Martinstown	S01445	34	
Moira	S02429	-2	
Moneymore (WWTW)	S01589	-7	
Moneyreagh (WWTW)	S00337	-106	A Flow & Load was carried out at this site and following an APT review was adopted for AIR13
Moorfields	S01446	44	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Moss-side (WWTW)	S01194	-88	
Mounthill	S01465	-107	
Mountjoy (Dungannon)	S02849	3	PE Updated with latest AIR13 Trade Information

Name of Works	CAR ID	PE Change	Comments
Moy (WWTW)	S02859	-242	PE Updated with latest AIR13 Trade Information
Moyagall Road(115-117)	S01799	-6	This WWTWs was upgraded with a Prim Tank & Filter replacing a previous Prim Tank
Mullaghbane (Forkhill)	S02279	1038	It was confirmed that this WWWTWs is now a pumpaway to Mullaghbane (Forkhill)
Mullans (Antrim)	S01118	1	PE Updated with latest AIR13 Trade Information
Newmills (WWTW)	S02852	121	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Newry (WWTW)	S02685	4214	PE updated with latest AIR13 Trade Information
Newtownbreda (WWTW)	S00342	29	PE Updated with latest AIR13 Trade Information
Newtownbutler (WWTW)	S03200	1	
Newtownstewart (WWTW)	S03202	1	
North Coast (WWTWs)	S04150	-91	
Omagh (WWTW)	S03999	712	
Pomeroy (WWTW)	S01593	214	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Poyntzspass (WWTW)	S02156	68	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Procklis	S01450	-20	
Rathfriland (WWTW)	S02713	-522	A Flow & Load was carried out at this site and following an APT review was adopted for AIR13
Saintfield (WWTW)	S00290	34	PE Updated with latest AIR13 Trade Information
Slaght	S01453	3	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Springfield	S03222	22	
Strabane	S03223	-108	PE Updated with latest AIR13 Trade Information
Stranocum	S01123	15	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Tamlaght (WWTW)	S03224	49	
Tamnamore (WWTW)	S02862	17	PE Updated with latest AIR13 Trade Information

Name of Works	CAR ID	PE Change	Comments
Tandragee	S02174	-2585	A Flow & Load was carried out at this site and following an APT review was adopted for AIR13
The Oyster Yard WWTW	S05533	-60	It was confirmed that this WWTWs was adopted by NIW for AIR13
Trillick (WWTW)	S03231	1	PE Updated with latest AIR13 Trade Information
Tullyroan	S02600	-9	PE Updated with latest AIR13 Trade Information
Warrenpoint (WWTW)	S02720	245	A population appraisal was carried out at this site and following an APT review, including update with latest AIR13 Trade Information, this was adopted for AIR13
Whitehouse	S00265	-15	PE Updated with latest AIR13 Trade Information
Total		-37326	Change in Line 2 PE since AIR12

The change in PE equates to an increase in load of 817.43 t BOD/yr (i.e. 37326 x 60 for 60g/hd/day /1000/1000 x 365) from AIR12 to AIR13.

Difference between AIR13 and AIR12:

Line 2 for AIR12 -	38366.45
Line 2 for AIR 13 -	39183.88
Total Difference -	-817.43

Line 3 - Total load receiving primary treatment only

The table below shows the changes in WWTWs receiving primary treatment only since AIR12 for Line 3. NB. Change in PE (-Ve AIR12 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Ardglass (WWTW)	S00268	341	Pe Updated with latest AIR13 Trade Information
Ballyhalbert Victoria	SO5412	-3115	Portavogie WWTWs is now a pumpaway to Ballyhalbert Victoria
Castlewellan Road (Dromore)	S02892	6	It was confirmed that WWTWs is private
Goragh Road	S02287	6	It was confirmed that WWTWs is private
Killough (Retention Tank)	S00275	-1445	This WWTW was previously incorrectly designated as a Sea Out Unscreened. It was confirmed there is a Prim tank on-site.
Mountain View (Drumintee)	S02278	-43	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13

Name of Works	CAR ID	PE Change	Comments
Moyagall Road(115-117)	S01799	6	This WWTWs was upgraded with a Prim Tank & Filter replacing a previous Prim Tank
Rathfriland Road	S02157	12	It was confirmed that WWTWs is private
	Total	-4232	Change in Line 3 PE since AIR12

The change in PE equates to an increase in load of 92.68 t BOD/yr (i.e. 4232 x 60 for 60g/hd/day /1000/1000 x 365) from AIR12 to AIR13.

Difference between AIR13 and AIR12:

Line 3 for AIR12 -	193.95
Line 3 for AIR 13 -	286.63
Total Difference -	-92.68

Line 4 - Total load receiving preliminary treatment only

The table below shows the changes in WWTWs receiving preliminary only since AIR12 for Line 4. NB. Change in PE (-Ve AIR13 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Ballycastle (WWTW)	S01071	13	Pe was updated with latest AIR13 Trade Information
Ballystrudder (Retention Tank)	S00264	-4536	It was confirmed that Whitehead now pumps to this WWTWs
Tully Road Headworks	S03975	-1068	It was confirmed that Glenarm now pumps to this WWTWs
Whitehead (WWTW)	S00452	4536	It was confirmed that this WWTWs now pumps to Ballystrudder
	Total	-1055	Change in Line 4 PE since AIR12

The change in PE equates to an increase in load of 23.1 t BOD/yr (i.e. 1055 x 60 for 60g/hd/day /1000/1000 x 365) from AIR12 to AIR13, allowing for rounding up and down and conversions.

Difference between AIR13 and AIR12:

Line 4 for AIR12 -	668.39
Line 4 for AIR 13 -	691.49
Total Difference -	-23.1

Line 5 - Total load entering sewerage system

The table below shows the changes in WWTWs since AIR12 that affects load entering the system for Line 5. NB. Change in PE (-Ve AIR13 PE Higher).

Name of Works	CAR ID	PE Change	Comments
Acton	S02111	21	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Aghagallon	S02393	14	
Aghalee	S02394	94	
Aghanloo (1)	S02989	-145	
Annacloy (WWTW)	S00292	-109	
Annalong (WWTW)	S00300	24	Pe Updated with latest AIR13 Trade Information
Annsborough	S02687	43	
Antrim (WWTW)	S01422	-465	
Ardglass (WWTW)	S00268	341	
Armoy (WWTW)	S01172	85	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Ballyavelin Road (133-135)	S04123	12	It was confirmed that WWTWs is a Private WWTWs
Ballybogie Road(7-9)	S04875	6	It was confirmed that this WWTWs now gravitates to Culmore
Ballycarry	S00267	-362	Pe Updated with latest AIR13 Trade Information
Ballycastle (WWTW)	S01071	13	
Ballyclare	S01467	1660	A population appraisal was carried out at this site and following an APT review, including update with latest Air13 Trade Information, this was adopted for AIR13
Ballyhalbert Victoria	SO5412	-3115	Portavogie WWTWs is now a pumpaway to Ballyhalbert Victoria
Ballyhornan Outfall	S04090	1	Pe Updated with latest AIR13 Trade Information
Ballykelly (L/Derry)	S03016	-8	
Ballykinler (WWTW)	S00299	1	
Ballymena (WWTW)	S01456	-2469	
Ballynadolly	S00327	-3	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Ballynahinch (Down)	S00311	2	Pe Updated with latest AIR13 Trade Information
Ballystrudder (Retention Tank)	S00264	-4536	It was confirmed that Whitehead now pumps to this WWTWs
Banbridge (WWTW)	S02102	300	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Belfast (WWTW)	S00345	-10493	
Bushmills (WWTW)	S01178	6	Pe Updated with latest AIR13 Trade Information
Capecastle	S01179	8	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Carrickfergus (WWTW)	S00261	3	Pe Updated with latest AIR13 Trade Information
Castledawson	S01609	1305	This WWTWs is now a pumpaway to Magherafelt

Name of Works	CAR ID	PE Change	Comments
Castledearg (WWTW)	S03042	-3	Pe Updated with latest AIR13 Trade Information
Castlewellan Road (Dromore)	S02892	6	It was confirmed that WWTWs is private
Clanabogan South WwTW	S05568	-18	It was confirmed that this WWTWs was adopted by NIW for AIR13
Coalisland	S02828	52	Pe Updated with latest AIR13 Trade Information
Cookstown (WWTW)	S01582	-136	
Cross Lane 9-22 ST	S05572	-25	This WWTWs replaced an existing WWTWs - Cross lane (9-22) under RWIP
Cross Lane(9-22)	S02427	25	This WWTWs was replaced by a New WWTWs - Cross lane 9-22 ST (SO5572)
Culmore (WWTW)	S03071	-2366	It was confirmed that Ballybogie Rd now gravitates to Culmore and also PE updated with latest AIR13 Trade Information
Derryhale	S02570	3	Pe Updated with latest AIR13 Trade Information
Dervock (WWTW)	S01102	20	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Desertmartin	S01614	-19	
Diviny	S02403	19	This WWTWs was replaced by a new WWTWs - Diviny New ST
Diviny NEW ST	S05546	-19	This WWTWs replaced an existing WWTWs - Diviny under RWIP
Donaghmore (WWTW)	S02840	-378	A population appraisal was carried out at this site and following an APT review, including update with latest AIR13 Trade Information, this was adopted for AIR13
Donemana	S03103	31	Pe Updated with latest AIR13 Trade Information
Donnybrewer	S03080	73	
Dorsy	S02267	-20	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Downpatrick (WWTW)	S00771	100	Pe Updated with latest AIR13 Trade Information
Draperstown	S01615	21	
Dromara (WWTW)	S00316	-1	
Dromore (Down)	S02127	138	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Dromore Highlands	S03085	10	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13

Name of Works	CAR ID	PE Change	Comments
Dungannon	S02850	-26623	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Dungiven	S03101	18	Pe Updated with latest AIR13 Trade Information
Dunloy	S01108	178	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Dunmurry	S00346	-90	Pe Updated with latest AIR13 Trade Information
Enniskillen	S03218	-1047	
Fivemiletown (WWTW)	S03113	496	
Forkhill	S02270	-1038	It was confirmed that Mullaghbane (Forkhill) now pumps to this site
Garrison (WWTW)	S03115	195	An on-site count was carried out by APT and adopted for AIR13
Garvetagh	S03117	15	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Gilford (WWTW)	S02162	33	Pe Updated with latest AIR13 Trade Information
Glenarm (Retention Tank)	S01461	1068	This WWTWs is now a pumpaway to Tully Road Headworks
Glenstall	S01109	811	Pe Updated with latest AIR13 Trade Information
Goragh Road	S02287	6	It was confirmed that WWTWs is private
Gortin (Tyrone)	S03124	25	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Gortscreagan	S03127	13	
Grange (Taylorstown)	S01442	-14	
Greencastle (Tyrone)	S03132	51	
Greenisland (WWTW)	S00263	-18	Pe Updated with latest AIR13 Trade Information
Greyabbey (WWTW)	S00214	187	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Greysteel (WWTW)	S03123	-15	Pe Updated with latest AIR13 Trade Information
Hilltown (WWTW)	S02701	3	
Irvinestown	S03137	538	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Kilkeel (WWTW)	S00313	270	Pe Updated with latest AIR13 Trade Information
Killinchy (WWTW)	S00252	-2889	
Killyleagh (WWTW)	S00273	484	
Kilrea	S01156	-20	

Name of Works	CAR ID	PE Change	Comments
Kilskeery	S03148	31	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Kircubbin (WWTW)	S04881	337	A population Report was carried out by McAdam Design Consultants in 2013 and this was amended with the latest occupancy rates and adopted for AIR13.
Larne (WWTW)	S02044	-149	Pe Updated with latest AIR13 Trade Information
Leitrim (New)	S02705	-32	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Limavady (WWTW)	S03162	475	Pe Updated with latest AIR13 Trade Information
Lisburn (New Holland)	S00329	-1485	
Lisnaskea (WWTW)	S03171	34	
Lisowan	S00287	1	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Lough Macrory (WWTW)	S03174	-45	
Loughguile	S01115	-4	
Maghaberry	S02412	3288	
Maghera (L/Derry)	S01629	7	Pe Updated with latest AIR13 Trade Information
Magherafelt (WWTW)	S01621	-1259	It was confirmed that Castledawson WWTWs now pumps to this site and PE was also updated with latest AIR13 Trade Effluent PE
Magheramason	S03177	2	Pe Updated with latest AIR13 Trade Information
Martinstown	S01445	34	
Moirá	S02429	-2	
Money more (WWTW)	S01589	-7	
Moneyreagh (WWTW)	S00337	-106	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Moorfields	S01446	44	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Moss-side (WWTW)	S01194	-88	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Mountain View (Drumintee)	S02278	-43	
Mounthill	S01465	-107	
Mountjoy (Dungannon)	S02849	3	Pe Updated with latest AIR13 Trade Information
Moy (WWTW)	S02859	-242	

Name of Works	CAR ID	PE Change	Comments
Mullaghbane (Forkhill)	S02279	1038	It was confirmed that this WWTWs is now a pumpaway to Mullaghbane (Forkhill)
Mullans (Antrim)	S01118	1	Pe Updated with latest AIR13 Trade Information
Newmills (WWTW)	S02852	121	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Newry (WWTW)	S02685	4214	Pe Updated with latest AIR13 Trade Information
Newtownbreda (WWTW)	S00342	29	
Newtownbutler (WWTW)	S03200	1	
Newtownstewart (WWTW)	S03202	1	
North Coast (WWTWs)	S04150	-91	
Omagh (WWTW)	S03999	712	
Pomeroy (WWTW)	S01593	214	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Portavogie(Retention Tank)	S00209	3115	This WWTWs is now a pumpaway to Ballyhalbert Victoria
Poyntzspass (WWTW)	S02156	68	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Procklis	S01450	-20	
Rathfriland (WWTW)	S02713	-522	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Rathfriland Road	S02157	12	It was confirmed that WWTWs is private
Rathlin (Retention Tank)	S00902	33	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Saintfield (WWTW)	S00290	34	Pe Updated with latest AIR13 Trade Information
Slaght	S01453	3	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Springfield	S03222	22	
Strabane	S03223	-108	Pe Updated with latest AIR13 Trade Information
Stranocum	S01123	15	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Tamlaght (WWTW)	S03224	49	

Name of Works	CAR ID	PE Change	Comments
Tamnamore (WWTW)	S02862	17	Pe Updated with latest AIR13 Trade Information
Tandragee	S02174	-2585	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
The Oyster Yard WWTW	S05533	-60	It was confirmed that this WWTWs was adopted by NIW for AIR13
Trillick (WWTW)	S03231	1	Pe Updated with latest AIR13 Trade Information
Tully Road Headworks	S03975	-1068	It was confirmed that Glenarm now pumps to this WWTWs
Tullyroan	S02600	-9	Pe Updated with latest AIR13 Trade Information
Warrenpoint (WWTW)	S02720	245	A population appraisal was carried out at this site and following an APT review, including update with latest AIR13 Trade Information, this was adopted for AIR13
Whitehead (WWTW)	S00452	4536	It was confirmed that this WWTWs now pumps to Ballystrudder
Whitehouse	S00265	-15	Pe Updated with latest AIR13 Trade Information
	Total	-36927	Change in Line 5 PE since AIR12

The change in Pe equates to an increase in load of 808.69 t BOD/yr (i.e. 36927 x 60 for 60g/hd/day /1000/1000 x 365) from AIR12 to AIR13, allowing for rounding up and down and conversions.

Difference between AIR13 and AIR12:

Line 5 for AIR12 -	39,504.06
Line 5 for AIR 13 -	40312.75
Total Difference -	808.69

Line 6 - Equivalent population served (resident)

The table below shows the changes in WWTWs since AIR12 that affects equivalent population served (resident) for Line 6. NB. Change in PE (-Ve AIR13 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Acton	S02111	21	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Aghagallon	S02393	14	
Aghalee	S02394	94	
Aghanloo (1)	S02989	-145	
Annacloy (WWTW)	S00292	-109	
Annalong (WWTW)	S00300	24	Pe Updated with latest AIR13 Trade Information
Annsborough	S02687	43	
Antrim (WWTW)	S01422	-465	
Ardglass (WWTW)	S00268	341	

Name of Works	CAR ID	PE Change	Comments
Armoy (WWTW)	S01172	85	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Ballyavelin Road (133-135)	S04123	12	It was confirmed that WWTWs is a Private WWTWs
Ballybogie Road(7-9)	S04875	6	It was confirmed that this WWTWs now gravitates to Culmore
Ballycarry	S00267	-362	Pe Updated with latest AIR13 Trade Information
Ballycastle (WWTW)	S01071	13	Pe Updated with latest AIR13 Trade Information
Ballyclare	S01467	1660	A population appraisal was carried out at this site and following an APT review, including update with latest AIR13 Trade Information, this was adopted for AIR13
Ballyhalbert Victoria	SO5412	-2965	Portavogie WWTWs is now a pumpaway to Ballyhalbert Victoria
Ballyhornan Outfall	S04090	1	Pe Updated with latest AIR13 Trade Information
Ballykelly (L/Derry)	S03016	-8	
Ballykinler (WWTW)	S00299	1	
Ballymena (WWTW)	S01456	-2469	Pe Updated with latest AIR13 Trade Information
Ballynadolly	S00327	-3	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Ballynahinch (Down)	S00311	2	Pe Updated with latest AIR13 Trade Information
Ballystrudder (Retention Tank)	S00264	-4536	It was confirmed that Whitehead now pumps to this WWTWs
Banbridge (WWTW)	S02102	300	A Flow & Load was carried out at this site and following an APT review was adopted for AIR13
Belfast (WWTW)	S00345	-10493	A Flow & Load was carried out at this site and following an APT review was adopted for AIR13
Bushmills (WWTW)	S01178	6	Pe Updated with latest AIR13 Trade Information
Capecastle	S01179	8	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Carrickfergus (WWTW)	S00261	3	Pe Updated with latest AIR13 Trade Information
Castledawson	S01609	1305	This WWTWs is now a pumpaway to Magherafelt

Name of Works	CAR ID	PE Change	Comments
Castlederg (WWTW)	S03042	-3	Pe Updated with latest AIR13 Trade Information
Castlewellan Road (Dromore)	S02892	6	It was confirmed that WWTWs is private
Clanabogan South WwTW	S05568	-18	It was confirmed that this WWTWs was adopted by NIW for AIR13
Coalisland	S02828	52	Pe Updated with latest AIR13 Trade Information
Cookstown (WWTW)	S01582	-136	Pe Updated with latest AIR13 Trade Information
Cross Lane 9-22 ST	S05572	-25	This WWTWs replaced an existing WWTWs - Cross lane (9-22) under RWIP
Cross Lane(9-22)	S02427	25	This WWTWs was replaced by a New WWTWs - Cross lane 9-22 ST (SO5572)
Culmore (WWTW)	S03071	-2366	It was confirmed that Ballybogie Rd now gravitates to Culmore and also PE updated with latest AIR13 Trade Information
Derryhale	S02570	3	Pe Updated with latest AIR13 Trade Information
Dervock (WWTW)	S01102	20	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Desertmartin	S01614	-19	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Diviny	S02403	19	This WWTWs was replaced by a new WWTWs - Diviny New ST
Diviny NEW ST	S05546	-19	This WWTWs replaced an existing WWTWs - Diviny under RWIP
Donaghmore (WWTW)	S02840	-378	A population appraisal was carried out at this site and following an APT review, including update with latest AIR13 Trade Information, this was adopted for AIR13
Donemana	S03103	31	Pe Updated with latest AIR13 Trade Information
Donnybrewer	S03080	73	
Dorsy	S02267	-20	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Downpatrick (WWTW)	S00771	100	Pe Updated with latest AIR13 Trade Information
Draperstown	S01615	21	
Dromara (WWTW)	S00316	-1	

Name of Works	CAR ID	PE Change	Comments
Dromore (Down)	S02127	138	A Flow & Load was carried out at this site and following an APT review was adopted for AIR13
Dromore Highlands	S03085	10	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Dungannon	S02850	-26623	A Flow & Load was carried out at this site and following an APT review was adopted for AIR13
Dungiven	S03101	18	Pe Updated with latest AIR13 Trade Information
Dunloy	S01108	178	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Dunmurry	S00346	-90	Pe Updated with latest AIR13 Trade Information
Enniskillen	S03218	-1047	
Fivemiletown (WWTW)	S03113	496	
Forkhill	S02270	-1038	It was confirmed that Mullaghbane (Forkhill) now pumps to this site
Garrison (WWTW)	S03115	234	An on-site count was carried out by APT and adopted for AIR13
Garvetagh	S03117	15	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Gilford (WWTW)	S02162	33	Pe Updated with latest AIR13 Trade Information
Glenarm (Retention Tank)	S01461	1068	This WWTWs is now a pumpaway to Tully Road Headworks
Glenstall	S01109	811	Pe Updated with latest AIR13 Trade Information
Goragh Road	S02287	6	It was confirmed that WWTWs is private
Gortin (Tyrone)	S03124	37	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Gortscreagan	S03127	13	
Grange (Taylorstown)	S01442	-14	
Greencastle (Tyrone)	S03132	51	
Greenisland (WWTW)	S00263	-18	Pe Updated with latest AIR13 Trade Information
Greyabbey (WWTW)	S00214	187	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Greysteel (WWTW)	S03123	-15	Pe Updated with latest AIR13 Trade Information
Hilltown (WWTW)	S02701	3	

Name of Works	CAR ID	PE Change	Comments
Irvinestown	S03137	538	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Kilkeel (WWTW)	S00313	270	Pe Updated with latest AIR13 Trade Information
Killinchy (WWTW)	S00252	-2889	
Killyleagh (WWTW)	S00273	484	
Kilrea	S01156	-20	
Kilskeery	S03148	31	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Kircubbin (WWTW)	S04881	337	A population Report was carried out by McAdam Design Consultants in 2013 and this was amended with the latest occupancy rates and adopted for AIR13.
Larne (WWTW)	S02044	-149	Pe Updated with latest AIR13 Trade Information
Leitrim (New)	S02705	-32	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Limavady (WWTW)	S03162	475	Pe Updated with latest AIR13 Trade Information
Lisburn (New Holland)	S00329	-1485	Pe Updated with latest AIR13 Trade Information
Lisnaskea (WWTW)	S03171	34	
Lisowan	S00287	1	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Lough Macrory (WWTW)	S03174	-45	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Loughguile	S01115	-4	
Maghaberry	S02412	3288	
Maghera (L/Derry)	S01629	7	Pe Updated with latest AIR13 Trade Information
Magherafelt (WWTW)	S01621	-1259	It was confirmed that Castledawson WWTWs now pumps to this site and PE was also updated with latest AIR13 Trade Effluent PE
Magheramason	S03177	2	Pe Updated with latest AIR13 Trade Information
Martinstown	S01445	34	
Moira	S02429	-2	
Moneymore (WWTW)	S01589	-7	
Moneyreagh (WWTW)	S00337	-106	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Moorfields	S01446	44	A population appraisal was carried

Name of Works	CAR ID	PE Change	Comments
Moss-side (WWTW)	S01194	-88	out at this site and following an APT review this was adopted for AIR13
Mountain View (Drumintee)	S02278	-43	
Mounthill	S01465	-107	
Mountjoy (Dungannon)	S02849	3	Pe Updated with latest AIR13 Trade Information
Moy (WWTW)	S02859	-242	
Mullaghbane (Forkhill)	S02279	1038	It was confirmed that this WWWTWs is now a pumpaway to Mullaghbane (Forkhill)
Newmills (WWTW)	S02852	121	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Newry (WWTW)	S02685	4214	Pe Updated with latest AIR13 Trade Information
Newtownbreda (WWTW)	S00342	29	
Newtownbutler (WWTW)	S03200	1	
Newtownstewart (WWTW)	S03202	1	
North Coast (WWTWs)	S04150	-91	Pe Updated with latest AIR13 Trade Information
Omagh (WWTW)	S03999	712	
Pomeroy (WWTW)	S01593	214	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Portavogie(Retention Tank)	S00209	2965	This WWWTWs is now a pumpaway to Ballyhalbert Victoria
Poyntzspass (WWTW)	S02156	68	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Procklis	S01450	-20	
Rathfriland (WWTW)	S02713	-522	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Rathfriland Road	S02157	12	It was confirmed that WWWTWs is private
Rathlin (Retention Tank)	S00902	57	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Saintfield (WWTW)	S00290	34	Pe Updated with latest AIR13 Trade Information
Slaght	S01453	3	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Springfield	S03222	22	

Name of Works	CAR ID	PE Change	Comments
Strabane	S03223	-108	Pe Updated with latest AIR13 Trade Information
Stranocum	S01123	15	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Tamlaght (WWTW)	S03224	49	
Tamnamore (WWTW)	S02862	17	Pe Updated with latest AIR13 Trade Information
Tandragee	S02174	-2585	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
The Oyster Yard WWTW	S05533	-60	It was confirmed that this WWTWs was adopted by NIW for AIR13
Trillick (WWTW)	S03231	1	Pe Updated with latest AIR13 Trade Information
Tully Road Headworks	S03975	-1068	It was confirmed that Glenarm now pumps to this WWTWs
Tullyroan	S02600	-9	Pe Updated with latest AIR13 Trade Information
Warrenpoint (WWTW)	S02720	257	A population appraisal was carried out at this site and following an APT review, including update with latest AIR13 Trade Information, this was adopted for AIR13
Whitehead (WWTW)	S00452	4536	It was confirmed that this WWTWs now pumps to Ballystrudder
Whitehouse	S00265	-15	Pe Updated with latest AIR13 Trade Information
	Total	-36841	Change in Line 6 PE since AIR12

Difference between AIR13 and AIR12:

Line 6 for AIR12 -	1769980
Line 6 for AIR 13 -	1806820
Total Difference -	-36840

Line 7 - Equivalent population served (resident) (Numerical consents)

The table below shows the changes in WWTWs since AIR12 that affects equivalent population served (resident) with numerical consents for Line 7. NB. Change in PE (-Ve AIR13 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Aghagallon	S02393	14	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Aghalee	S02394	94	
Aghanloo (1)	S02989	-145	
Annacloy (WWTW)	S00292	-109	
Annsborough	S02687	43	Pe Updated with latest AIR13 Trade Information
Antrim (WWTW)	S01422	-465	
Ardglass (WWTW)	S00268	341	
Armoy (WWTW)	S01172	85	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13

Name of Works	CAR ID	PE Change	Comments
Ballycarry	S00267	-362	Pe Updated with latest AIR13 Trade Information
Ballycastle (WWTW)	S01071	13	
Ballyclare	S01467	1660	A population appraisal was carried out at this site and following an APT review, including update with latest AIR13 Trade Information, this was adopted for AIR13
Ballykelly (L/Derry)	S03016	-8	Pe Updated with latest AIR13 Trade Information
Ballymena (WWTW)	S01456	-2469	
Ballynahinch (Down)	S00311	2	
Banbridge (WWTW)	S02102	300	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Belfast (WWTW)	S00345	-10493	
Bushmills (WWTW)	S01178	6	Pe Updated with latest AIR13 Trade Information
Carrickfergus (WWTW)	S00261	3	
Castledawson	S01609	1305	This WWTWs is now a pumpaway to Magherafelt
Castleberg (WWTW)	S03042	-3	Pe Updated with latest AIR13 Trade Information
Coalisland	S02828	52	
Cookstown (WWTW)	S01582	-136	
Culmore (WWTW)	S03071	-2366	It was confirmed that Ballybogie Rd now gravitates to Culmore and also PE updated with latest AIR13 Trade Information
Derryhale	S02570	3	Pe Updated with latest AIR13 Trade Information
Dervock (WWTW)	S01102	20	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Desertmartin	S01614	-19	
Donaghmore (WWTW)	S02840	-378	A population appraisal was carried out at this site and following an APT review, including update with latest AIR3 Trade Information, this was adopted for AIR13
Donemana	S03103	31	Pe Updated with latest AIR13 Trade Information
Donnybrewer	S03080	73	
Downpatrick (WWTW)	S00771	100	
Draperstown	S01615	21	
Dromara (WWTW)	S00316	-1	
Dromore (Down)	S02127	138	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Dungannon	S02850	-26623	

Name of Works	CAR ID	PE Change	Comments
Dungiven	S03101	18	Pe Updated with latest AIR13 Trade Information
Dunloy	S01108	178	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Dunmurry	S00346	-90	Pe Updated with latest AIR13 Trade Information
Enniskillen	S03218	-1047	
Fivemiletown (WWTW)	S03113	496	
Forkhill	S02270	-1038	It was confirmed that Mullaghbane (Forkhill) now pumps to this site
Garrison (WWTW)	S03115	234	An on-site count was carried out by APT and adopted for AIR13
Gilford (WWTW)	S02162	33	Pe Updated with latest AIR13 Trade Information
Glassdrumman (Down)	S00302	-260	This WWTWs is a new numerical consented WWTWs for AIR13
Glenstall	S01109	811	Pe Updated with latest AIR13 Trade Information
Gortin (Tyrone)	S03124	37	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Grange (Taylorstown)	S01442	-14	
Greencastle (Tyrone)	S03132	51	
Greenisland (WWTW)	S00263	-18	Pe Updated with latest AIR13 Trade Information
Greyabbey (WWTW)	S00214	187	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Hilltown (WWTW)	S02701	3	Pe Updated with latest AIR13 Trade Information
Irvinestown	S03137	538	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Kilkeel (WWTW)	S00313	270	Pe Updated with latest AIR13 Trade Information
Killinchy (WWTW)	S00252	-2889	
Killyleagh (WWTW)	S00273	484	
Kilrea	S01156	-20	
Kircubbin (WWTW)	S04881	337	A population Report was carried out by McAdam Design Consultants in 2013 and this was amended with the latest occupancy rates and adopted for AIR13.
Larne (WWTW)	S02044	-149	Pe Updated with latest AIR13 Trade Information
Limavady (WWTW)	S03162	475	
Lisburn (New Holland)	S00329	-1485	
Lisnaskea (WWTW)	S03171	34	

Name of Works	CAR ID	PE Change	Comments
Lough Macrory (WWTW)	S03174	-45	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Loughguile	S01115	-4	
Maghaberry	S02412	3288	
Maghera (L/Derry)	S01629	7	Pe Updated with latest AIR13 Trade Information
Magherafelt (WWTW)	S01621	-1259	It was confirmed that Castledawson WWTWs now pumps to this site and PE was also updated with latest AIR13 Trade Effluent PE
Magheramason	S03177	2	Pe Updated with latest AIR13 Trade Information
Martinstown	S01445	34	
Moira	S02429	-2	
Moneymore (WWTW)	S01589	-7	
Moneyreagh (WWTW)	S00337	-106	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Moorfields	S01446	44	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Moss-side (WWTW)	S01194	-88	
Mountjoy (Dungannon)	S02849	3	Pe Updated with latest AIR13 Trade Information
Moy (WWTW)	S02859	-242	
Mullaghbane (Forkhill)	S02279	1038	It was confirmed that this WWWTWs is now a pumpaway to Mullaghbane (Forkhill)
Mullans (Antrim)	S01118	-260	This WWWTWs is a new numerical consented WWWTWs for AIR13
Newmills (WWTW)	S02852	121	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Newry (WWTW)	S02685	4214	Pe Updated with latest AIR13 Trade Information
Newtownbreda (WWTW)	S00342	29	
Newtownbutler (WWTW)	S03200	1	
Newtownstewart (WWTW)	S03202	1	
North Coast (WWTWs)	S04150	-91	
Omagh (WWTW)	S03999	712	
Pomeroy (WWTW)	S01593	214	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Portavogie (Retention Tank)	S00209	2965	This WWWTWs is now a pumpaway to Ballyhalbert Victoria
Poyntzpass (WWTW)	S02156	68	A population appraisal was carried out at this site and following an APT review was adopted for AIR13

Name of Works	CAR ID	PE Change	Comments
Rathfriland (WWTW)	S02713	-522	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Saintfield (WWTW)	S00290	34	Pe Updated with latest AIR13 Trade Information
Strabane	S03223	-108	
Stranocum	S01123	15	A population appraisal was carried out at this site and following an APT review was adopted for AIR13
Tamlaght (WWTW)	S03224	49	
Tamnamore (WWTW)	S02862	17	Pe Updated with latest AIR13 Trade Information
Tandragee	S02174	-2585	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Trillick (WWTW)	S03231	1	Pe Updated with latest AIR13 Trade Information
Warrenpoint (WWTW)	S02720	257	A population appraisal was carried out at this site and following an APT review, including update with latest AIR13 Trade Information, this was adopted for AIR13
Whitehouse	S00265	-15	Pe Updated with latest AIR13 Trade Information
	Total	-34318	Change in Line 7 PE since AIR12

Difference between AIR13 and AIR12:

Line 7 for AIR12 -	1,708,580
Line 7 for AIR 13 -	1,742,900
Total Difference -	-34320

Line 8 - Number of sewage treatment works

The number of WWTWs of 1018, on this line differs from the total of 1028 as shown in Table 17c, as the former does not include the screened outfalls (2 No.) and the unscreened outfalls (8 No.), as per the definition for this line.

The table below shows the changes in numbers of WWTWs since AIR12 for Line 8.

Name of Works	CAR ID	Change in Nr of STWs	Comments
Ballyavelin Road (133-135)	S04123	Reduction	It was confirmed that WWTWs is a Private WWTWs
Ballybogie Road(7-9)	S04875	Reduction	It was confirmed that this WWTWs now gravitates to Culmore
Castledawson	S01609	Reduction	This WWTWs is now a pumpaway to Magherafelt
Castlewellan Road (Dromore)	S02892	Reduction	It was confirmed that WWTWs is private
Clanabogan South WwtW	S05568	Addition	It was confirmed that this WWTWs was adopted by NIW for AIR13

Name of Works	CAR ID	Change in Nr of STWs	Comments
Cross Lane 9-22 ST	S05572	Addition	This WWTWs replaced an existing WWTWs - Cross lane (9-22) under RWIP
Cross Lane(9-22)	S02427	Reduction	This WWTWs was replaced by a New WWTWs - Cross lane 9-22 ST (SO5572)
Diviny	S02403	Reduction	This WWTWs was replaced by a new WWTWs - Diviny New ST
Diviny NEW ST	S05546	Addition	This WWTWs replaced an existing WWTWs - Diviny under RWIP
Goragh Road	S02287	Reduction	It was confirmed that WWTWs is private
Killough (Retention Tank)	S00275	Addition	These WWTWs was previously incorrectly designated as a Sea Out Unscreened. It was confirmed there is a Prim tank on-site.
Mullaghbane (Forkhill)	S02279	Reduction	It was confirmed that this WWTWs is now a pumpaway to Mullaghbane (Forkhill)
Rathfriland Road	S02157	Reduction	It was confirmed that WWTWs is private
The Oyster Yard WWTW	S05533	Addition	It was confirmed that this WWTWs was adopted by NIW for AIR13
Whitehead (WWTW)	S00452	Reduction	It was confirmed that this WWTWs now pumps to Ballystrudder
		Net Reduction	5

Difference between AIR13 and AIR12:

Line 8 for AIR12 -	1,023
Line 8 for AIR 13 -	1,018
Total Difference -	5

Line 9 – Treatment capacity available

The table below shows the changes in Treatment Capacity Available at WWTWs since AIR12 for Line 9. NB. Change in PE (-Ve AIR13 PE Higher)

Name of Works	CAR ID	PE Change	Comments
Ballyavelin Road (133-135)	S04123	12	It was confirmed that WWTWs is a Private WWTWs
Ballybogie Road(7-9)	S04875	6	It was confirmed that this WWTWs now gravitates to Culmore
Castledawson	S01609	663	This WWTWs is now a pumpaway to Magherafelt
Castlewellan Road (Dromore)	S02892	6	It was confirmed that WWTWs is private

Name of Works	CAR ID	PE Change	Comments
Charlestown	S02399	-128	This WWTWs was upgraded under the RWWIP project
Clanabogan South WwTW	S05568	-28	It was confirmed that this WWTWs was adopted by NIW for AIR13
Cross Lane 9-22 ST	S05572	-50	This WWTWs replaced an existing WWTWs - Cross lane (9-22) under RWIP
Cross Lane(9-22)	S02427	8	
Cullion (Bready)	S03070	-13	This WWTWs was upgraded under the RWWIP project
Dempsey Park	S01100	15	
Diviny	S02403	20	This WWTWs was replaced by a new WWTWs - Diviny New ST under RWWIP
Diviny NEW ST	S05546	-20	This WWTWs replaced an existing WWTWs - Diviny under RWIP
Drumintee	S02269	-142	The Design PE of Drumintee was reassessed by Scientific Services
Forkhill	S02270	-1604	This WWTWs was upgraded for AIR13
Garvetagh	S03117	-15	This WWTWs was upgraded under the RWWIP project
Glack (WWTW)	S03118	19	
Goragh Road	S02287	6	It was confirmed that WWTWs is private
Gortscreagan	S03127	43	This WWTWs was upgraded under the RWWIP project
Knock Terrace	S02139	-12	
Leitrim (New)	S02705	55	
Limavady (WWTW)	S03162	-4768	This WWTWs was upgraded for AIR13
Lisowan	S00287	20	This WWTWs was upgraded under the RWWIP project
Macfin	S01116	104	
Mullaghbane (Forkhill)	S02279	700	It was confirmed that this WWTWs is now a pumpaway to Mullaghbane (Forkhill)
Newry (WWTW)	S02685	-51800	This WWTWs was upgraded for AIR13
Procklis	S01450	-5	This WWTWs was upgraded under the RWWIP project
Rathfriland Road	S02157	12	It was confirmed that WWTWs is private
Slaght	S01453	-20	This WWTWs was upgraded under the RWWIP project
Spamount	S03221	-780	Design PE of upgraded WWTWs was confirmed for AIR13
Springfield	S03222	-10	This WWTWs was upgraded under the RWWIP project
Swatragh (WWTW)	S01637	-675	This WWTWs was upgraded for AIR13
Tamnaherin	S03226	-256	
The Oyster Yard WWTW	S05533	-150	It was confirmed that this WWTWs was adopted by NIW for AIR13

Name of Works	CAR ID	PE Change	Comments
Whitehead (WWTW)	S00452	4918	It was confirmed that this WWTWs now pumps to Ballystrudder
	Total	-53869	Change in Line 9 PE since AIR12

The change in PE equates to an increase in load of 3.23 t BOD/day (i.e. 53869 x 60 for 60g/hd/day /1000/1000) from AIR12 to AIR13, allowing for rounding up and down and conversions.

Difference between AIR13 and AIR12:

Line 9 for AIR12 -	129.18
Line 9 for AIR 13 -	132.41
Total Difference -	3.23 increase

The confidence grade for line 8 remains as A2 (as for AIR12), 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

In addressing the reporter's recommendation from AIR12, Table 15 (NIW Only) Line 16 confidence grade has been changed from B2 to A2.

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 AIR13 submission Table 15 (NIW Only) relates to sewage sludge produced for 2012/13 (tds) as recorded by PPP and monthly by WW Area Sludge Officers (reconciled using the SLS). This is presented in the monthly Sludge Management Report along with an estimated quantity of WwTW's 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).

Line 16 Total sewage sludge transferred to PPP

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).

Line 17 Total sewage sludge disposal by NI Water

Northern Ireland Water disposes the same amount of sludge as that produced. NIW remains committed to compliance with the requirements of the "Safe Sludge Matrix". A total of 97.59% of sewage sludge went to PPP during 2012/13. 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 2012/13.

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 not previously reported by the Contractors.

The variations are tabulated below;

PPP Production	AIR13	AIR12	AIR11	AIR10
Armagh WWTW	0.535	0.570	0.759	0.84
Richhill WWTW	0.065	0.066	0.213	0.21
Ballynacor WWTW	2.069	3.330	2.468	2.29
Ballyrickard WWTW	1.158	1.225	1.627	1.717
NDA WWTW	1.628	1.559	1.753	1.654
Kinnegar WWTW	0.726	0.823	0.792	0.7
Omega Screenings and Grit	0.106			
Kinnegar Screenings and Grit	0.022			
Totals	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 AIR12 the Omega Contractor reported a disposal of 38.3ttds sludge disposed of. This year the reported figure is 37.6ttds.

The variance of -0.7ttds is considered to be a combination of:

- (i) timing of data capture (sludges being collected and receipted for disposal)
- (ii) more accurate measurement and records demanded under the Omega contract
- (iii) variations in quantities of sludge produced across PPP and NIW STWs.
- (iv) Additional reporting of Screenings and Grit.

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.
- 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 AIR13 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 c recirculated Sludge/sludge liquors in Lines 1-7 recirculated Sludge/sludge liquors in Lines 1-7 consistent with the methodology presented in AIR 10-12.

Total**Line 14 - Percentage unsatisfactory sludge disposal**

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 AIR12 the PPP Contractor reported a disposal of 38.3 ttds sludge disposed of. This year the reported figure is 37.6 ttds.

In addition, in AIR12 Company disposed of 0.7 ttds relating to grit/screenings sludge. This year the reported figure is 0.9 ttds.

In total, AIR12 reported 39.0 ttds of sludge disposed of by all parties. In this reporting year the figure is 38.4 ttds

The variance of -0.6 ttds is considered to be a combination of:

- (i) A decrease 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, not previously recorded or reported

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		5		6		
			REPORTING YEAR	CG	REPORTING YEAR	CG	REPORTING YEAR	CG	REPORTING YEAR	CG	REPORTING YEAR	CG	REPORTING YEAR	CG	
			2007-08		2008-09		2009-10		2010-11		2011-12		2012-13		
A ASSET BALANCE AT APRIL 1															
1	Total length of sewers	km	2	14,263.62		14,319.50	B3	14,465.23	B3	14,745.61	B3	14,904.68	B3	15,090.35	B3
2	Total length of "critical" sewers	km	2	2,467.00		2,469.01	C4	2,889.10	C4	3,653.62	C3	3,622.52	C3	3,656.86	C3
B CHANGES DURING REPORT YEAR															
3	New "critical" sewers	km	2	2.01	A2	13.04	D3	14.30	B2	16.18	B2	4.62	B2	33.50	C3
4	"Critical" sewers - inspection by CCTV/man entry	km	2	5.47	A3	31.06	C4	40.43	C4	86.89	B3	53.18	C4	51.79	C4
5	"Critical" sewers - renovated	km	2	1.82	A3	3.15	A3	0.81	A2	9.40	A2	2.86	B2	1.41	B2
6	"Critical" sewers - replaced	km	2	3.61	A3	2.813	A3	5.07	A2	6.50	B3	2.64	B2	1.04	B2
7	Abandoned "critical" sewers and other changes	km	2	0.00	A2	-407.05	C4	0.00	A2	0.05	A2	0.00	B2	0.00	B2
8	New "non-critical" sewers	km	2	41.11	A3	135.88	B3	153.48	B2	195.62	B2	181.90	B2	145.40	C3
9	"Non-critical" sewers - renovated	km	2	1.13	A3	0.75	A3	1.38	A2	6.26	A2	6.26	B2	2.31	B2
10	"Non-critical" sewers - replaced	km	2	8.91	A3	5.42	A3	6.19	A2	4.58	B3	1.02	B2	19.29	B2
11	Abandoned "non-critical" sewers and other changes	km	2	0.99	A3	410.24	A3	0.49	A2	0.09	A2	0.72	B2	0	B2
12	Sewer collapses per 1,000km	nr	1	47.3	B4	96.3	C5	68.7	C5	84.9	B2	80.7	B4	73.6	B3
13	Sewer blockages per 1,000km	nr	1	1,181.0	B4	1,936.4	C5	1,791.0	C5	1,759.8	B2	1,619.8	B4	1,363.6	B3
13a	Number of sewer blockage clearance which exceeds 6 hours	nr	0									N/C		1,250	B3
13b	Number of sewer blockage clearance which exceeds 12 hours	nr	0									N/C		849	B3
13c	Number of sewer blockage clearance which exceeds 24 hours	nr	0									N/C		444	B3
C ASSET BALANCE AT MARCH 31															
14	Total length of sewers	km	2	14,319.5	B3	14,465.2	B3	14,745.6	B3	14,904.68	B3	15,090.35	B3	15,254.37	B3
15	Total length of "critical" sewers	km	2	2,469.0	C4	2,889.1	C4	3,653.6	C3	3,622.52	C3	3,656.86	C3	3,716.68	C3
D INTERMITTENT DISCHARGES															
16a	Number of unsatisfactory intermittent discharges excluding CSOs (EHS)	nr	0	441	C4	85	A2	192	C2	218	C2	204	C2	197	C2
16b	Number of unsatisfactory intermittent discharges CSOs (EHS)	nr	0	408	C4	270	A2	381	C2	379	C2	349	C2	318	C2
17a	Number of intermittent discharges excluding CSOs	nr	0	1,377.0	B4	1,391.0	B4	1,455.0	B4	1,519	B4	1,591	B3	1,675	B3
17b	Number of CSOs	nr	0	799	B4	814	B4	751	B4	748	B4	780	B3	779	B3
E DRAINAGE AREA PLANS															
18	Cumulative number of drainage area plans completed	nr	0	49	A1	54	A1	70	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	30	A1	28	A1	26	A1	0	A1	0	A1	1	A1
20	Total sewerage drainage areas	nr	0	109	A2	109	A2	269	A2	260	A2	261	A2	256	A2
21	Cumulative % drainage area plan studies completed	%	1	45.0	A1	49.5	A1	26.0	A2	27.3	A2	27.2	A2	27.7	A2
22	% population/properties covered by completed studies	%	1	43.0	A2	46.0	A2	49.6	C4	55.1	B3	54.7	B3	53.3	B3
F NOMINATED SEWERAGE SERVICE OUTPUTS															
23	Delivery of improvements to nominated UIDs as part of a defined programme of work	nr	0							20	A1	43	A1	38	B3
24	Delivery of improvements to WWTW through nominated schemes as part of a defined programme of work	nr	0							29	B3	15	B3	12	B3
25	Investment in improvements to small wastewater treatment works as part of the rural wastewater investment programme	£m	1							8.1	A2	7.9	A2	3.4	A2

Table 16 - Sewerage Service Activities

Introduction

NIW has been endeavouring to ensure that GIS can provide a single source of data for lines such as 1, 2, 3, 7, 8, 11, 14 and 15 as recommended by the Reporter. Apart from lines 1 and 2 being extracted from the AIR11 Table 16 (lines 14 and 15); NIW has managed to populate lines 14 and 15 from GIS. However due to current software and NIW business procedures, other information for other lines such as 3, 7, 8 and 11 is sourced from others within the organisation.

It should be noted that the PPP Wastewater Contractors have not undertaken any sewerage activity (in the report year) covering the categories of new, renovated, replaced or abandoned sewers (critical or non-critical sewers).

Line 1 – Total length of sewers at 1 April

The value of 15090.35 km has been extracted from line 14 of the AIR12 Table 16.

Line 2 – Total length of ‘critical’ sewers at 1 April

The value of 3656.86km has been extracted from line 15 of the AIR12 Table 16.

Line 3 – New ‘critical’ sewers

Units	EP	EP CG	Net Sew	CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	7.501	A2			26.000	C3			33.501	C3

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 not changed significantly from AIR12; however the division between critical and non-critical sewers has changed very significantly. The ‘adopted length’ has increased from 0.562 km in AIR 12 to 26 km in AIR13. As a consequence, the entry for this line has increased from 4.62 km to 33.50 km.

The methodology has changed within Developer Services for recording the adoptions as critical or non-critical. Previously, the definition was made on the basis of pipe diameter only. For AIR 13, Developer Services utilised the Asset Information section of NIW to run an analysis of the sewer lengths. Hence as recommended within the AIR12 Reporter’s report, the identification of critical sewers by Developer’s Services now aligns with the WRC Rehabilitation Manual.

Asset Information has attached a C3 confidence grade to their analysis which is lower than the grade (B2) which was attached to last year’s return by Developer Services. However it is noted that the process adopted by Developer’s Services would in effect warrant a confidence grade of B2, but the system in place within NIW regarding the submission and quality assurance of information results in the need to maintain the C3.

Line 4 ‘Critical’ sewers – inspection by CCTV/man entry

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	1.709	A2	29.159	C4			20.920	B3	51.788	C4

The total length surveyed, 51.79 km, is similar to the AIR 12 length of 53.18km.

The confidence grade is unchanged at C4. An overall confidence grade of C4 has been allocated to line 4, as the data is a combination from 3 sources, with the majority of the data from Networks Sewerage having C4. Networks Sewerage data has a confidence grade of C4 as the information provided by the Networks Field Managers does not distinguish between critical and non-critical sewers.

It is acknowledged that greater effort should be made in terms of the classification of lengths surveyed as being critical or non-critical.

Line 5 'Critical' sewers – renovated

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	0.952	A2	0.462	B2					1.414	B2

The length of critical sewer renovated by Engineering Procurement has reduced from 2.55 km in AIR 12 to 0.952 km. As a consequence the total for this line has fallen.

The return for this line from Networks Sewerage is produced by the external contractor for sewer maintenance. The confidence grade for this line is maintained as was for AIR12 i.e. B2.

Line 6 'Critical' sewers – replaced

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	1.040	A2	0.000	B2					1.040	B2

The length of critical sewer replaced by Engineering Procurement has decreased from 2.64 km in AIR 12 to 1.04 km. As a consequence the total for this line has decreased.

The return for this line from Networks Sewerage is produced by the external contractor for sewer maintenance. The confidence grade for this line is maintained as was for AIR12 i.e. B2.

Line 7 Abandoned 'critical' sewers and other changes

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	0.0	A2	0.0	B2					0.0	B2

Both Engineering Procurement and Networks Sewerage have reported a zero return for abandoned sewers. The confidence grade for this line is maintained as was for AIR12 i.e. B2.

Line 8 New 'non-critical' sewers

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	12.792	A2			132.607	C3			145.399	C2

The length of new non-critical sewers laid by Engineering Procurement has decreased from 24.693 km in AIR 12 to 12.792 km for AIR13. The length of non-

critical sewer adoptions by Developer Services has decreased from 157.203 to 145.399 km.

The methodology has changed within Developer Services for recording the adoptions as critical or non-critical. Previously, the definition was made on the basis of pipe diameter only. For AIR 13, Developer Services utilised the Asset Information section of NIW to run an analysis of the sewer lengths. Hence as recommended within the AIR12 Reporter's report, the identification of critical sewers by Developer's Services now aligns with the WRC Rehabilitation Manual.

Asset Information has attached a C3 confidence grade to their analysis which is lower than the grade (B2) which was attached to last year's return by Developer Services. However it is noted that the process adopted by Developer's Services would in effect warrant a confidence grade of B2, but the system in place within NIW regarding the submission and quality assurance of information results in the need to maintain the C3.

Line 9 'Non-critical' sewers – renovated

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
Km	1.03	A2	1.281	B2					2.311	B2

The length of non-critical sewers renovated by Engineering Procurement has fallen from 5.325km in AIR 12 to 1.03 km. As a consequence the total for this line has decreased from 6.26 km to 2.311 km.

The return for this line from Networks Sewerage is produced by the external contractor for sewer maintenance. The confidence grade for this line is maintained as was for AIR12 i.e. B2.

Line 10 'Non-critical' sewers – replaced

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	19.290	A2	0.0	B2					19.290	B2

The length of non-critical sewers replaced by Engineering Procurement has increased significantly from 1.02km in AIR12 to 19.29km.

Engineering Procurement states that a single project – Benone Area Sewerage – has contributed 14.50 km of the 19.29km length.

The return from for this line from Networks Sewerage is produced by the external contractor for sewer maintenance. The confidence grade for this line is maintained as was for AIR12 i.e. B2.

Line 11 Abandoned 'non-critical' sewers and other changes

Units	EP	EP CG	Net Sew	Net Sew CG	Dev Serv	Dev Serv CG	AM	AM CG	Total	Overall CG
km	0.000	A2	0.000	B2					0.000	B2

Both Engineering Procurement and Networks Sewerage have reported a zero return for abandoned sewers. The confidence grade for this line is maintained as was for AIR12 i.e. B2.

Lines 3 – 11 General Commentary

Progress against PC10 Monitoring Plan

The renewal of sewers is represented in the Monitoring Plan as a target output. The target is 63.8 km for the PC10 period. The aggregate total of renewal achieved for the period – as defined by the figures within AIR11, AIR 12 and AIR 13 – is 63.58km (see table below) therefore the total has been broadly achieved.

Sewer Renewal (Renovation or Replacement)

	10/11	11/12	12/13	Total
Output target in Monitoring Plan - km	24.0	25.9	13.9	63.8
Output achieved – km	26.74	12.78	24.06	63.58

NIW is targeting investment in the sewerage infrastructure to maintain and achieve stable serviceability. The work carried out to date has been almost exclusively the repair of collapsed or partially collapsed sewers.

Critical sewers are identified using standard industry definitions – WRc Sewer Rehabilitation Manual Categories A, B and C. A drop down menu, based on the WRc Manual is incorporated into the sewerage infrastructure monthly return form on Captrax, to enable project managers to select the reason for a sewer being classified as critical.

The only sewer cleaning work carried out was what was considered necessary to allow CCTV surveys to be conducted or where a relining technique required it.

Confidence Grades

All information is compiled from EP sewerage infrastructure monthly returns. This is an accurate measurement of the actual lengths of critical and non-critical sewers laid, renovated or replaced, and abandoned, 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 overall confidence grade has been assessed as A2, to take account of inconsistent interpretation of the definition of a critical sewer and some very slight reservations as to the completeness of compliance with the reporting procedure.

The inputs from CSDD are extracted from a spreadsheet which is completed by an external contractor. The CSDD figures have generally been given a confidence grade of B2.

Sewer Adoptions

Sewers are adopted under the provisions of Article 161 of the Water and Sewerage Services (Northern Ireland) Order 2006. The basis of this is that a developer i.e. any person constructing or proposing to construct a sewer, lateral drain or works can enter into an agreement under Article 161 for the future adoption of sewers, subject to the conditions of the Order. Existing sewers, lateral drains and works may also be considered for adoption under Article 159 of the Order.

Procedure for Agreeing Sewers for Future Adoption

The Company operates a 'sewers for adoption' procedure as set out in the Developers Guidance Notes, copies of which have been issued to most developers and developers agents. The information is also on the Company's web page. Sewer

construction should comply with the current edition of the Sewers for Adoption manual used by the Company.

At the commencement of the process, a developer submits his drainage layout to Developers Services for assessment of the proposed system of sewers that will service the development and be offered for adoption at a later date. The hydraulic calculations are checked and the point of connection to the public sewerage system confirmed. When all aspects of the proposed drainage layout, including confirmation of any relevant approval to discharge to a watercourse and if appropriate a water order consent the Article 161 Agreement is authorised.

The sewerage system is constructed at the developer's own expense and vested in the Company. NI Water applies fees and charges in respect of the inspection and adoption process. Charges are in line with the rates set out by the Water Research Council (WRc) and adopted by the NI Utility Regulator.

Process for Adoption of Sewers, associated Lateral Drains and Works

When the sewers have been constructed to a prescribed standard, the developer will make a written request to NI Water to have the sewers adopted. Developers Services arrange an inspection of the sewerage system and if in order a Preliminary Certificate of Adoption is issued. The Company generally requires a 12 month maintenance period after which a Final Certificate of Adoption will be issued.

Length of Sewers and Associated Infrastructure for Adoption

The adoption process requires the developer to provide 'as built' drawings of the sewerage system. The length of sewers, number of manholes and any associated works such as waste water pumping stations or package waste water treatment works are recorded by regional teams.

The Final Adoption Certificate records the length and diameter of sewers that are at a suitable standard for adoption by the Company. The sewers and associated lateral drains and works are maintainable by the Company effective from the date of the adoption certificate.

Details are issued to the Asset Information Development for placing on the Geographical Information System (GIS). Copies of Final Adoption Certificates are kept on the Developers Services file. Details are also recorded in a Final Adoptions book, and captured in a sewers Adopted spreadsheet.

Developers Services use a Technical Services Database which is being currently upgraded to meet the information needs of the 2006 Order legislation. This is under test and will electronically log all details including the length of sewers, lateral drains and works adopted by the Company.

Changes during Report Year (Lines 12, 13, 13a, 13b and 13c)

Work has progressed during the year to identify critical and lateral sewers these layers have been recently added to NIW's Corporate Asset Register. Work is also progressing on identifying sewer repairs as a result of CCTV surveys. As result of this work NIW are now in a better position for AIR13 to report on whether collapses or blockages have occurred in a private lateral, public lateral or public main sewer.

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.

Calculation Process for Line 12

Table 16a: Line 1: Total number of rising main failures

Table 16a: Line 2: Total number of gravity sewer collapses

Table 16: Line 14: Total length of sewers at 31 March 2013

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 2013 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.

Calculation Process for Line 13

Table 16a: Line 3: Total number of sewer blockages

Table 16: Line 14: Total length of sewers at 31 March 2013

The number of sewer blockages is divided by the total length of sewers at 31 March 2013 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.

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 16a Lines 1 and 2 must be reversed.

Table 16 Line 12 has been calculated using the figure reported for table 16a Lines 1 and 2 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 16a Line 3 must be reversed.

Table 16 Line 13 has been calculated using the figure reported for table 16a Line 3 and the total length of sewers figure reported for Table 16 Line 14.

Confidence Grading – Lines 12 & 13

NIW are using data from checked and paid invoices (B2) and total length of sewers (B3). Due to the fact that NIW are not able to assess the number of collapses/blockages occurring on lateral sewers a confidence grade of B4 has been allocated. NIW expects to improve the grade in AIR13.

Lines 13a, 13b and 13c

Line 13a: Number of blockage clearance which exceeds 6 hours

Line 13b: Number of blockage clearance which exceeds 12 hours

Line 13c: Number of blockage clearance which exceeds 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.

Line 14 – Total length of sewers

Differences in data between current and previous year

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 has been a slightly higher increase this year compared to the previous years as a result of the ADAI Infrastructure work package. This project aimed to fill gaps in the NIW infrastructure records where data was missing. In total 73.1Km of sewers were captured. However not all of these will have been included in the AIR13 figure as in some cases the ownership of these sewers will not have been determined. Full details of this work can be obtained from the ADAI Missing Infrastructure Stage 3 closure report. 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

Differences in data between current and previous year

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. Of the 59Km increase in total critical sewers this year analysis showed that 40Km of these were previously classified as unclassifiable or as non-critical. These have been classified as critical this year due to variations in the 3rd party datasets used and previously unknown attributes being added to existing sewers. As the result of the analysis is still 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 12 was:

CSOs:	349
Other UIDs:	204

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 AIR13 are equal to the above figures minus the numbers UID improvements which were executed in 12/13. i.e.

CSOs: 349 – 31(see list attached of UID Improvements in 12/13) = 318.

Other UIDs: 204 – 7(see list attached of UID improvements in 12/13) = 197.

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 -17b

Table A - Depicting differences between the sewerage system overflows between AIR12 and AIR13

Intermittent Discharges	APT Preliminary AIR12 Number	AIR12 Number (after removal of Dual, Duplicates and Bifurcation Assets)	APT Preliminary AIR13 Number	Total Number of Dual, Duplicates and Bifurcation assets to be removed	AIR13 Number (after removal of Dual, Duplicates and Bifurcation Assets))	Difference between AIR12 & AIR13 (after removal of Dual, Duplicates and Bifurcation Assets)
Combined Storm Overflows (CSOs)	844	780	820	41	779	-1
Sewage Pumping Stations (SPSs)	1004	988	1062	10	1052	64
Total Number of Intermittent Discharges	1848	1768	1882	51	1829	61

Hence for AIR13 the total number of Sewerage System Overflows is 779+ 1050 i.e. 1829

From the APT data used there has been a preliminary net decrease of 24 No: CSOs since AIR12 (i.e. 844 to 820). This is made up of 54 No: new CSOs minus 78 No: CSOs that have been removed.

In addition there has been a preliminary net increase of 58 No: SPS overflows since AIR12 (i.e. 1004 to 1062). This is made up of 106 No: new SPSs overflows minus 48 No: SPSs overflows that have been removed.

Preliminary net decrease of 24 No: CSOs since AIR12

Preliminary net increase of 58 No: SPS overflows since AIR12

Preliminary total increase of 34 No: overflows since AIR12 (i.e. 1848 to 1882).

(For a further breakdown see Table B, C & D – Changes in Intermittent Discharges by Drainage Area below).

The preliminary number of consented assets held by NIW is 1882. However a number of these assets (51no.) are not included in the finalised number, a decrease of 29no from AIR12 (i.e. 80 to 51). This is because these are duplicates, dual manholes or bifurcation manholes which do not fall within the industry standard for reporting purposes.

The 51 No: sewerage system overflows have been categorised into the following:

- 34 No: Dual Manholes;
- 6 No: Bifurcation Manholes;
- 11 No: Duplicate Assets
- (Consisting of 10 No: SPS overflows & 1 No: CSOs)

(For further details see Tables E, F & G below)

Overall this equates to a:

Net increase of 34 No: Preliminary overflows since AIR12

Plus: 1848 No: Preliminary overflows identified in AIR12

Sub Total: 1882 No: sewerage system overflows

Minus: 51 No: O/Fs not included in the finalised number for AIR13

Total: 1831 No: sewerage system overflows identified for AIR13

An exercise has been ongoing over the AIR 10, 11, 12 & 13 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 12, 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 38 catchments in AIR 13 a total of 82 (8 in AIR 11 + 36 in AIR 12 + 38 in AIR 13). This updated information has been included on GIS and submitted to NIEA with changes included in the AIR13 figures.

It was hoped that this process would have been completed in AIR 13, 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 AIR13

Drainage Area	No of CSO's added since AIR12	No of CSO's removed since AIR12	No of SPS's added since AIR12	No of SPS's removed since AIR12	Comments
Antrim	N/A	0	N/A	2	SPS Removed: SP002022852, SP002022840
Armagh	N/A	1	N/A	0	CSO Removed: CO000984128
Ballyrickard	N/A	14	N/A	1	SPS Removed: NO CAR ID CSO Removed: NM001116772, NM001116499 NM001118964, NM001358888, NM001359303, NM001134760, NM001130491, NM001130603, NM001130495, NM001129028, NM001130588, NM001138941, NM001130596, NM001129122
Belfast	N/A	1	N/A	1	CSO Removed: NM001170174 SPS Removed: SP002022130
Culmore	N/A	1	N/A	0	CSO Removed: NM001040594
Downpatrick	N/A	2	N/A	0	CSO Removed: CO003050088, NM001308297
Forkhill	N/A	N/A	1	N/A	SPS Added: WW002063924 (pump away)
Larne	N/A	0	N/A	1	SPS Removed: NM001380221
North Down	N/A	9	N/A	0	CSO Removed: CO000984274, NM001127272 NM001127144, NM001109105, NM001109821, NM001109593, CO003073594, NM001128525, NM001128634
Whitehead	N/A	N/A	1	N/A	SPS Added: SP003224832 (pump away)
Total Number of intermittent discharges added or removed since AIR12	0	28	2	5	
Net decrease in CSO's since AIR12	28				
Net decrease in SPS's since AIR12			3		

Table C – AIC Preliminary changes in Intermittent discharges by drainage area for AIR13

Drainage Area	CSO's added since AIR12	CSO's removed since AIR12	SPS's added since AIR12	SPS's removed since AIR12	Comments
Antrim	+1	-3	+7	-3	CSO's added: CO002965241 CSO's removed: CO000984679, CO000984680, CO000984709 SPS's added: SP002022847, SP002022855, SP002022868, SP002022838, SP002022669, SP002975725, SP002022845 SPS's removed: SP002022858, SP002022835, SP002022856,
Armagh	+1	-2	+4	-2	CSO's added: CO003073641 CSO's removed: NM001011368, NM001011369 SPS's added: SP002021786, SP002021835, SP002021831, SP002021832 SPS's removed: SP002021833, SP002021737
Arney	0	0	+1	0	SPS's added: SP002022021
Ballycastle	+1	0	0	0	CSO's added: CO000984753
Ballyclare	+2	-1	+2	-6	CSO's added: CO000984676, CO002586969 CSO's removed: CO000984674 SPS's added: SP002022869, SP002022821 SPS's removed: SP002022822, SP002022827, SP002022830, SP002022826, SP002022825, SP002022829
Ballygowan	0	0	0	0	
Ballyhalbert	0	0	+2	0	SPS's added: SP003106895, SP002990029 (pump away)
Ballyrickard	+4	-2	+2	-1	CSO's added: CO003036517, CO003053117, CO000984307, CO003202189 CSO's removed: CO003053198, CO003036517 SPS's added: SP002022290, SP002022320 SPS's removed: SP002022253
Belfast	+14	-25	+2	-9	CSO's added: CO000984498, CO000984478 CO000984535, CO000984379, CO000984537, CO000984460, CO003186803, CO000984191, CO000984215, CO000984492, CO000984502, CO000984509, CO000984540, CO003057219 CSO's removed: CO000984463, CO000984512, CO000984193, CO000984350, CO000984349, CO000984360, CO000984196, CO000984202, CO000984199, CO000984200, CO000984473, CO000984198, CO000984464, CO000984462, CO000984458, CO003042664 CO000984378, CO000984380, CO000984377, CO000984374, CO000984373, CO000984373 CO000984375, CO000984208, CO000984510 SPS's added: SP002634757, SP002885229 SPS's removed: SP002022140, SP002022348, SP002022349, SP002022349, SP002022137, SP002022344, SP002022142, SP002022346, SP002022349

Drainage Area	CSO's added since AIR12	CSO's removed since AIR12	SPS's added since AIR12	SPS's removed since AIR12	Comments
Belleek Erne	0	0	+1	0	SPS's added: SP002022054
Benone	0	0	+1	0	SPS's added: SP002021695
Blackwatertown	0	0	+1	-1	SPS's added: SP002021662 SPS's removed: SP002021779
Cargan	0	0	+2	0	SPS's added: SP002022688, SP002573352
Carrickmore	+1	0	0	0	CSO's added: CO003037227
Castlecaufield	0	0	+1	-1	SPS's removed: SP002021827 SPS's added: SP002021687
Clogh	0	0	0	-1	SPS's removed: SP002022636
Coalisland	+1	-1	+12	-1	CSO's added: CO002864779 CSO's removed: CO000984115 SPS's added: SP002021800, SP002021757, SP002021758, SP002021798, SP002021799, SP002021806, SP002021809, SP002021679, SP002021837, SP002021838, SP002021839, SP002021805 SPS's removed: SP002021796
Creagh	0	0	+3	0	SPS's added: SP002022902, SP002022737, SP002973780
Culmore	+8	-4	+12	-6	CSO's added: CO000984188, CO000984165, CO002965080, CO000984170, CO003121871, CO003082793, CO003079063, CO002977127 CSO's removed: CO000984160, CO000984154, CO000984161, CO000984161 SPS's added: SP003019680, SP002889071 SP002641421, SP003082779, SP002021959, SP002021948, SP002021915, SP002021947, SP002021946, SP002021929, SP002021919, SP002021912 SPS's removed: SP002021914, SP002021923, SP002021935, SP002021936, SP002021940, SP002021939
Derryhale	0	0	+1	0	SPS's added: SP002022458
Downpatrick	+2	0	+4	0	CSO's added: CO003126380, CO000984417 SPS's added: SP002022500, SP002022504, SP002022503, SP002022501
Dunloy	0	0	+1	0	SPS's added: SP002022984
Fintona	0	0	0	0	
Forkhill	0	0	+1	0	SPS's added: SP002022622
Kinawley	0	0	+1	0	SPS's added: SP002022002
Larne	+3	-3	+3	-1	CSO's added: CO002586899, CO002845703, CO000984668 CSO's removed: CO000984654, CO000984658, CO000984667 SPS's added: SP002630081, SP002629900, SP002022816 SPS's removed: SP002022806

Drainage Area	CSO's added since AIR12	CSO's removed since AIR12	SPS's added since AIR12	SPS's removed since AIR12	Comments
Maghera	+1	0	+3	0	CSO's added: CO002586960 SPS's added: SP002022886, SP002022885, SP002022721
Magherafelt	+3	0	+11	-2	CSO's added: CO000984718, CO000984721, CO000984723 SPS's added: SP002022690, SP002022703, SP002022698, SP002022706, SP002022738, SP002022736, SP002022694, SP002821212, SP002022891, SP002022695, SP002022696 (pumpaway) SPS's removed: SP002022692, SP002022691
Moneymore	+1	0	0	-1	CSO's added: CO003126714 SPS's removed: SP002022700
Mountnorris	0	0	+3	0	SPS's added: SP002022629, SP002022611, SP002021688
Mullaghboy	0	0	+1	0	SPS's added: SP003177151
Newcastle	+6	-1	0	0	CSO's added: CO002852892, CO002852919, CO000984439, CO003049359, CO003049311, CO000984587 CSO's removed: CO000984438
Newtownhamilton	0	0	+1	-1	SPS's added: SP002022626 SPS's removed: SP002022610
North Down	+4	-5	+10	-3	CSO's added: CO002898560, CO002987820, CO003000702, CO003106341 CSO's removed: CO003075094, CO003073594, CO003073452, CO003073483, CO000984277 SPS's added: SP002022238, SP002022324, SP002022325, SP002022310, SP002022264, SP002022243, SP002022244, SP002022228, SP003107646, SP002987824 SPS's removed: SP002022237, SP002022239, SP002021865
Plumbridge	0	0	0	-1	SPS's removed: SP002022083
Richill	0	-2	+4	0	CSO's removed: CO000984113, CO000984113 SPS's added: SP002021789, SP002021750, SP002021749, SP002021748
Warrenpoint	+1	-1	+6	-3	CSO's added: CO000984594 CSO's removed: CO000984593 SPS's added: SP002022573, SP002022571, SP002853197, SP002022370, SP002941395, SP003118665 SPS's removed: SP002022568, SP002022569, SP002022566
Whitehead	0	0	+1	0	SPS's added: SP003115442
	54	-50	104	-43	
AIC Net Increase in CSO's since AIR12	+4				There has been a net increase of 4 No: CSO's since AIR12. This is made up of 54 No: new CSOs minus 50 No: CSOs that have been removed.
AIC Net Increase in SPS's since AIR12			61		There has been a net increase of 61 No: SPS O/Fs since AIR12. This is made up of 104 No: new SPS O/Fs minus 43 No: SPS O/Fs that have been removed.

Table D – Combined Totals of APT & AIC Preliminary changes in Intermittent discharges by drainage area for AIR13

	CSO's added since AIR12	CSO's removed since AIR12	SPS's added since AIR12	SPS's removed since AIR12
Preliminary APT number of intermittent discharges added or withdrawn since AIR12	0	28	2	5
Preliminary AIC number of intermittent discharges added or withdrawn since AIR12	54	50	104	43
Subtotals	54	78	106	48
Preliminary net increase or decrease in SPS & CSO's since AIR12	-24		+58	
Preliminary total increase in sewage system overflows for AIR13	+34			

Table E - Dual Manholes not included in the finalised number for AIR13

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	New Park CSO	Y	1
Lurgan	NM001229100	CSO 30	Y	15
Lurgan	NM001229426	CSO 35	Y	
Lurgan	NM001230688	CSO 31	Y	
Lurgan	NM001231354	CSO 34	Y	
Lurgan	NM001231355	CSO 33	Y	
Lurgan	NM001231583	CSO 32	Y	
Lurgan	NM001232930	CSO 36	Y	
Lurgan	NM001234366	CSO 39	Y	
Lurgan	NM001278775	CSO 38	Y	
Lurgan	NM001278776	CSO 37	Y	
Lurgan	NM001280565	CSO 41	Y	
Lurgan	NM001281577	CSO 54	Y	
Lurgan	NM001282390	CSO 42	Y	
Lurgan	NM001282868	CSO 45	Y	
Lurgan	NM001283755	CSO 46	Y	
Whitehouse	NM001339615	Whitehouse CSO UH 02	Y	17
Whitehouse	NM001339619	Whitehouse CSO UH01	Y	
Whitehouse	NM001340884	Whitehouse CSO UH 03	Y	
Whitehouse	NM001340886	Whitehouse CSO TG01	Y	
Whitehouse	NM001340887	Whitehouse CSO TG02	Y	
Whitehouse	NM001345599	CSO 18 Manse Road HA04 CSO (2)	Y	
Whitehouse	NM001345603	Whitehouse CSO HP01	Y	
Whitehouse	NM001346012	Whitehouse CSO GP01	Y	
Whitehouse	NM001347238	Whitehouse CSO GO10	Y	
Whitehouse	NM001348440	CSO 12 Manse Road EM05 CSO(1)	Y	
Whitehouse	NM001349241	Whitehouse CSO DM16	Y	
Whitehouse	NM001349313	Whitehouse CSO XJ03	Y	
Whitehouse	NM001349319	Whitehouse CSO W103	Y	
Whitehouse	NM001349320	Whitehouse CSO W101	Y	
Whitehouse	NM001349658	Whitehouse AJ01	Y	
Whitehouse	NM001349670	Whitehouse AK01	Y	
Whitehouse	NM001350136	Whitehouse CSO VH01	Y	
Desertmartin	NM001445776		Y	1
Total No: of Dual Manholes not included in the finalised number for AIR13				34

Table F - Bifurcation Manholes not included in the finalised number for AIR13

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
Enniskillen	NM001076519	Lakeview Park CSO	Y	1
East Belfast	NM001149057	CSO 84	Y	1
Waringstown	NM001238461	CS 06	Y	2
Waringstown	NM001238462	CS 10	Y	
Rathfriland	NM001291669	CSO 02	Y	1
Carrickfergus	NM001353097	CSO 01	Y	1
Total No: of Bifurcation Manholes not included in the finalised number for AIR13				6

Table G - Duplicate Manholes not included in the finalised number for AIR13

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
Whitehouse	CO000984647	CSO 2a	Y	1
Donnybrewer (Eglinton)	SP002021880	SPS 4a	Y	5
Donnybrewer (Eglinton)	SP002021886	SPS 3a	Y	
Donnybrewer (Eglinton)	SP002021887	SPS 2a	Y	
Donnybrewer (Eglinton)	SP002021888	SPS 5a	Y	
Donnybrewer (Eglinton)	SP002021891	SPS 1a	Y	
Lurgan	SP002022218	NE PS	Y	1
Newry	SP002022593	SPS 20a	Y	2
Newry	SP002022606	SPS 24a	Y	
Greenisland	SP002022781	SPS 5A	Y	2
Greenisland	SP002022784	SPS 3A	Y	
Total No: of Duplicate Manholes not included in the finalised number for AIR13				11

Table H - Total number of Overflows within WWTWs

	AIR12	AIR13
Total number of Overflows from within WWTWs	603	623

Hence for AIR13 the total number of overflows within WWTWs is 623

The overall number of WWTW overflows from AIR12 to AIR13 has had a net increase of 20 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 AIR13 is mainly due to works being upgraded in the PC10 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 AIR12 are as follows:

- 5 No: overflows within WWTWs withdrawn since AIR12. (See Table I, J, K, & L below)
- 25 No: Additional overflows within WWTWs since AIR12. (See Table M, N & O below)
- A net increase of 20 overflows since AIR12.

Table I - Overflows within WWTWs withdrawn since AIR12 due to works becoming a pump away in AIR13

NAME of Works	Site ID	Status in AIR13	Withdrawn O/Fs Since AIR12
Portavogie (Retention Tank)	S00209	Pumpaway to Ballyhalbert	0
Whitehead (WWTW)	S00452	Pumpaway to Ballystrudder	-1
Castledawson	S01609	Pumpaway to Magherafelt	-1
Glenarm (Retention Tank)	S01461	Pumpaway to Tullyroad Head Works	0
Mullaghbane (Forkhill)	S02279	Pumpaway to Forkhill	-1
Total No of overflows withdrawn since AIR12 due to the WWTWs becoming a pump away			-3

Table J - Overflows within WWTWs withdrawn since AIR12 due to works being upgraded

NAME of Works	Site ID	Status in AIR13	Withdrawn O/Fs Since AIR12
N/A	N/A	N/A	0
Total No of overflows withdrawn since AIR12 due to the works being upgraded			0

Table K – Withdrawn Overflows within WWTWs due to incorrect designation in AIR13

NAME of Works	Site ID	Status in AIR12	Withdrawn O/Fs Since AIR12
Cross Lane(9-22)	S02427	WWTWs was replaced by a New WWTWs (on a new site) - Cross lane 9-22 ST (SO5572)	0
Diviny	S02403	WWTW was replaced by new WWTWs - Diviny New ST (on a new site) under RWWIP	-2
Total No of Withdrawn Overflows due to incorrect designation in AIR12			-2

Table L– Summary of the total number of Overflows withdrawn since AIR12

Total No of overflows withdrawn since AIR12 due to the works becoming a pump away	-3
Total No of overflows withdrawn since AIR12 due to the works being upgraded	0
Total No of Withdrawn Overflows due to incorrect designation in AIR12	-2
Combined Total No: of overflows within WWTWs withdrawn since AIR12	-5

Table M - Additional overflows within WWTWs since AIR12 due to WWTW upgrades

NAME of Works	Site ID	Status in AIR13	Overflows for AIR13 from Process Info	Additional O/Fs Since AIR12
Lisowan	S00287	Works upgraded	1 No additional FFT O/F to Storm Tank	1
Dempsey Park	S01100	Works Upgraded	1 No additional FA O/F	1
Magherafelt (WWTW)	S01621	Works Upgraded	2 No additional Overflows-pumping station E/Os	2
Macfin	S01116	Works Upgraded	1 No additional FFT O/F to Storm Tank	1
Slaght	S01453	Works Upgraded	1 No additional FFT O/F to Storm Tank	1
Charlestown	S02399	Works Upgraded	1 No additional FFT O/F to Storm Tank	1
Darkley (WWTW)	S02569	Works Upgraded	1 No additional FA O/F 1 No additional FFT to Storm	2
Forkhill	S02270	Works Upgraded	Removal of 1 No FA O/F to now include 1 No FTT O/F with Storm. 1 No additional FA O/F	1
Knock Terrace	S02139	Works Upgraded	1 No additional FFT O/F to Storm Tank	1
Leitrim (New)	S02705	Works Upgraded	Removal of 1 No FFT O/F to include: 1 No additional FA O/F (which also acts as PS E/O) 1 No additional FFT OF to Storm Tank	1
Redford	S02853	Works Upgraded	1 No additional FA O/F 1 No addition inlet PS ERO	2
Cullion (Bready)	S03070	Works Upgraded	1 No additional FFT O/F to Storm Tank	1
Garvetagh	S03117	Works Upgraded	1 No additional FFT O/F to Storm Tank	1
Glack (WWTW)	S03118	Works Upgraded	1 No additional FFT O/F to Storm Tank	1
Gortscreagan	S03127	Works Upgraded	1 No additional FFT O/F to Storm Tank	1
Tamnaherin	S03226	Works Upgraded	1 No additional FA O/F 1 No additional FTT O/F with Storm	2
Clanabogan South WwTW	S05568	Adopted WWTW	1 No additional Formula "A" O/F (which also acts as PS E/O)	1
Total No: of additional overflows since AIR12 due to WWTWs being upgraded				21

Table N - Additional overflows within WWTWs due to incorrect designation in AIR12

NAME of Works	CAR ID	Status in AIR13	Changes in Overflows for AIR12 from Process Info	Additional O/Fs Since AIR12
Cross Lane 9-22 ST	S05572	WWTW replaced an existing WWTW - Cross lane (9-22) under RWWIP	1 No additional FFT O/F to Storm Tank	1
Diviny New ST	S05546	WWTW replaced an existing WWTW - Diviny under RWWIP	1 No additional FA O/F 1 No additional FTT O/F with Storm	2
Bready (WWTW)	S03971	Final Effluent discharge extended to the Foyle under Phase 1 Base Maintenance	1 No additional FFT O/F	1
Totals No: of additional overflows within WWTWs due to incorrect designation in AIR12				4

Table O – Summary of additional overflows within WWTWs since AIR12

Total No: of additional overflows since AIR12 due to works being upgraded	21
Totals No: of additional overflows within WWTWs due to incorrect designation in AIR12	4
Combined Total: of Additional overflows within WWTWs since AIR12	25

For AIR13 - 2 No: Overflows has been withdrawn (see Table K) and 4 No: additional overflow has been included (see Table N above). This is result of overflows being incorrectly being designated in AIR12. This equates to net increase 2 No: overflows due to incorrect designation in AIR12.

Table P – Summary of Overflow type within WWTWs

Overflow Type	AIR12 Overflows from WWTWs	AIR12 Overflows listed for comparison purposes with AIR11	AIR13 Overflows from WWTWs	AIR13 Overflows listed for comparison purposes with AIR12	Difference between AIR12 & AIR13
Formula "A" O/Fs only	157	174	163	182	8
Formula "A" O/Fs (which also act as PS E/O)	12		15		
Formula "A" O/Fs with Storm (which also act as PS E/O)	5		4		
FFT O/Fs only	124	295	115	305	10
FFT O/Fs (which also act as PS E/O)	18		16		
FFT O/Fs with Storm Retention	142		163		
FFT O/Fs with Storm Retention (which also act as PS E/O)	11		11		
3 DWF	18	18	18	18	0
Additional Overflows-storm	6	116	6	118	2
Additional Overflows-other structures	6		6		
Additional Overflows-pumping station E/O	104		106		
Total No of WWTWs Overflows	603	603	623	623	20

Since AIR12 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 endeavoured 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 1052, and the total number of overflows within WWTWs of 623) is **1675**.

Comparison between AIR12 & AIR13 - Intermittent discharges excluding CSOs

The number of intermittent discharges excluding CSOs in AIR12 was 1591. This was made up of 603 WWTW overflows + 988 SPS overflows. In comparison the number of intermittent discharges excluding CSOs in AIR13 has increased by 84 No: intermittent discharges to 1675.

The net increase in the number of intermittent discharges excluding CSOs is due to a net increase of 20 No: WWTW overflows and a net increase of 64 No: SPS overflows since AIR12. 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) is **779**.

Comparison between AIR12 & AIR13– CSOs in the Sewerage System

The number of CSOs in the sewerage system has had a net decrease of 1 No: CSOs since AIR12 i.e. (780 in AIR12 - 779 in AIR13).

This net decrease previously discussed is mainly due to the ongoing project by AIC in conjunction with the Networks Sewerage field managers and business unit to verify the number of assets within drainage areas that actually need consented.

PPP Section – Intermittent Discharges

It is noted that there have been no changes during AIR12.

Lines 18 - 22 - Drainage Area Plans

Background

NI Water has a programme of Drainage Area Studies which commenced in 1995. The programme relates to those drainage areas with residential population greater than one thousand and includes 109 drainage areas. The status of the 109 networks within the programme is summarised in the schedule attached. 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.

Procurement

The 5-year framework agreement, through which Drainage Area Study work was procured by NIW, expired in October 2010. A new framework agreement was established in December 2012; at 31st March 2013 only one Drainage Area Study appointment had been made under the framework – for the Newtownbreda network.

An 'Asset Performance – Wastewater Networks' section was established within NIW in April 2010, the principal function of the section is the identification of needs for capital investment within the networks. It is intended that an 'in-house' network modelling function will be established in year 2013 which will have responsibility for the maintenance of models and the assessment of development. In anticipation of a new procurement mechanism for external consultants becoming available, NI Water intends to implement a review of the current

Drainage Area Study format – the review to be informed by our acquired knowledge of the regulatory process, and by the development of the Asset Performance section within NI Water. In particular, it is envisaged that greater emphasis will be placed upon:

- The recently established DG5 Register;
- A formal classification of UIDs by NIEA;
- The incorporation of the principles within the new Sewerage Risk Management (WRc).

Information is derived from a status report for the Drainage Area Study programme at April 2013.

Line 18 – includes:

Category A:

- Those networks where a complete Drainage Area Study, including DAP report, has been executed since 2003.
- Those networks where a complete revisit of a Drainage Area Study, including DAP report, has been executed since 2003.
-

Category B:

- Those networks where a scoping study (abbreviated investigation) has been executed.

Line 19 – includes those networks where a Drainage Area Study is currently in progress – which is deemed to be currently 1. (See commentary for explanation).

Line 20 -: For the purposes of this line, 'drainage area' is taken to mean a sewer-network which serves a population equivalent of greater than 250 i.e. 256 no have been included.

The number of such networks has decreased from 261 in AIR12 as a result of the following pumpaways:

Name of Works	SITE CAR ID	Comments on Changes For AIR13
Mullaghbane (Forkhill)	S02279	Upgrade of Mullaghbane (Forkhill) is complete. This is now a pumpaway to Forkhill.
Glenarm (Retention Tank)	S01461	This WWTWs was confirmed as a pumpaway by the Field Manager for the site. This pumps to Tully Road Headworks.
Castledawson	S01609	Confirmed by Field Manager that Castledawson is now totally pumping away to Magherafelt
Portavogie (Retention Tank)	S00209	Confirmed that Portavogie is now pumping away to Ballyhalbert
Whitehead (WWTW)	S00452	Confirmed that Whitehead acts as Terminal PS to Ballystrudder

Line 21 - Equal to Line 18 divided by Line 20.

Line 22 -

- The residential population relating to those networks defined by Line 18 is 805,526 (from the DAS Status report).
- The population connected to the public sewerage network is 1,512,024 (from Table 13, Line 10 – AIR 13)

Line 22 – Percentage population/properties covered by completed studies

The confidence grade is necessarily that which is attached to the input population i.e. B3.

The following is a table of the DASs which have been carried out, with an indication of the domestic population and DAP date.

**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		
	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	
	CATEGORY B POPULATION	34634	

CATEGORY C - DAS STAGE 1 COMPLETE

Initial DAS	Catchment	Domestic population	
	Coalisland	6576	
	Gilford	2028	
	Markethill	2276	
	Castledearg	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	
	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).

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

Line 23 - Delivery of improvements to nominated UIDs as part of a defined programme of work

NI Water has reviewed the process for the identification, monitoring and review of UIDs delivered in PC10 as part of the development of the PC13 programme. This included linking CAR and FD identifiers, developing CPMR to hold all relevant UID information and introducing review steps for all potential UIDs identified.

This has revealed a number of additional completed UIDs, both non-nominated and a PC13 nominated output and a UID which was claimed in error. Caw Park CSO, Londonderry, UID114 was claimed in the second year of PC10 on further investigations and review of record drawings this UID had not been completed. This is within the confidence grades seen within the previous submission. This will be deducted from the overall total claimed in PC10. In KC404 Coleraine (DAP Phase 1) UID041 Ballycairn Playing Fields CSO 8a and UID043 Screen Road CSO were not completed in PC10, also KR488 Linen Gardens, Belfast UID052 will run into PC13 before it will be completed. The UID totals are summarised in the table below.

Delivery year	10/11	11/12	12/13	Total	Comments
PE10 Nominated Outputs	14	39	11	64	UID 114 removed from PE10 nominated totals after review found that that CSO has been completed.
Additional Outputs	6	4	26	36	NI Water has completed additional UIDs outside the PE10 submission when funding became available
PC13 Nominated outputs			1	1	Delivery of KN646 – Winters Lane CSO – delivered early
Total	20	43	38	101	

After undertaking a complete overview of the UID program for PC10 there was a number of UID's which had not been claimed in the period for a number of reasons, so we have listed them below to claim them in the 3rd year of the program.

Unclaimed additional UIDs

UID code and name	Comments	PE10 Monitoring Plan status
UID178 Annaghnoon WWPS	This project started as an external flooding project but after the completion of the investigation was carried out the understanding was that the WWPS was under capacity. A full upgrade of the station was carried out with new overflow and screen.	Additional Claim
UID075 Millisle Dap Stage 2 CSO 1	Project delivering this output was completed – KR439 – remaining work now allocated to separate project.	PC13 output – subject to agreement of PC13 funding
UID034 Castlewellan Park CSO	This UID was added to this project after the upgrade of Castlewellan WWTW was turned into a pump away solution to Annesborough WWTW so the CSO was not required on the inlet sewer of the WWTW.	Excluded – potential PC13 output
UID035 Castlewellan WWTW(Storm Tanks)	This UID was added to this project after the upgrade of Castlewellan WWTW was turned into a pump away solution to Annesborough WWTW so the CSO was not required as the storm tanks were no longer required.	Excluded – potential PC13 output
UID278 Murlough WWPS (ERO)	When full construction was carried out it was agreed to create a new overflow rather than keeping this ERO, so the closure of this ERO was not discovered until hand over.	Additional Claim
UID252 Horners Lane CSO	This project started as an internal flooding project but after the completion of the investigation was carried out it was realised by upgrading the size of the pipe we could also close this CSO.	Additional Claim
UID262 Dublin Road CSO	This was part of the Newry DAP for SBP but due to complications with storage this CSO was not able to be closed and the project completed until the storage tank was fully operational.	Additional Claim

Additional PC13 nominated outputs

UID244 Winters Lane CSO	This PC13 output was progressed when additional funding became available in late 12/13.
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The PE10 Monitoring Plan includes a target of 68 UID improvements for the 3-year period. NI Water has substantially exceeded the number of UIDs improved in PC10, with 20 UID improvements in 10/11, 43 in 11/12 (excluding UID 114) and 38 including additional UIDs in 12/13. This gives a total UID delivery of 101 in PC10.

Reviewing the PE10 monitoring plan the 38 UIDs completed were split as follows:

- 11 UIDs delivered as per the PE10 monitoring plan;
- 1 PC13 nominated outputs - KN646 Winters Lane;
- 26 Additional UIDs including the ones uncovered through review with NIEA;
and
- 38 UIDs to be claimed in total

Confidence grades

NI Water has improved the reporting process and the cross checking process for this line for the 12/13 AIR submission, without improvements throughout the data chain as outlined in the methodology. The confidence grades for this line were determined using the reporting guidance and were assessed as B3 – based on the evidence within the methodology and the small number of sites claimed.

UIDs Delivered during the first year of PC10 – AIR11 Period

	Catchment	UID Address	FD Reference	Project Id	Comments	Operational Date
1	Draperstown	CSO 02 Derrynoyd Rd	UID098	KB428	Closed	02/07/2010
2	Draperstown	CSO 01 St Patrick's St.	UID099	KB428	Closed	02/07/2010
3	Londonderry Sewer Imps Stage 2 - Duke St PS	CSO 28 Duke St RAB	UID100	KL428	Formula A and 6mm screening	28/03/2011
4	Londonderry Sewer Imps Stage 2 - Duke St PS	CSO 29 Duncreggan Road	UID101	KL428	Formula A and 6mm screening	28/03/2011
5	Londonderry Sewer Imps Stage 2 - Duke St PS	CSO 30 Dunfield Terrace	UID102	KL428	Formula A and 6mm screening	28/03/2011
6	Londonderry DAP Victoria Rd Work Package	CSO 13 Victoria Road	UID107	KL445	New CSO Chamber and 6mm screening	11/10/2010
7	Londonderry DAP Victoria Rd Work Package	CSO 53 Sunningdale Drive	UID162	KL448	Closed	29/10/2010
8	Londonderry DAP Strathfoyle & Drumahoe Work Package Drumahoe Old PS	Formula A at PS New CSO 07 Chamber, 6mm screens	UID112	KL449	Formula A at PS, New CSO chamber and 6mm screening	02/09/2010
9	Londonderry DAP _ Strathfoyle/Drumahoe WP : Caw PS	CSO 05 Caw PS	UID113	KL450	New CSO Chamber and 6mm screening at new location also upgrade of overflow pipe	01/07/2010
10	Gilford Road, Portadown, Sewerage Upgrades	Levaghery Close CSO 09	UID115	KG153	Closed	10/08/2010
11	Gilford Road, Portadown, Sewerage Upgrades	Princess Way CSO 10	UID116	KG153	Closed	10/08/2010
12	Gilford Road, Portadown, Sewerage Upgrades	Edan Avenue SPS CSO 05	UID117	KG153	Increased storage and pass forward Formula A. Extension of EO to river Bann.	10/08/2010
13	Ballywalter	Ballywalter DAP - Stage 1 Main St CSO	UID029	KR440	Closed	30/09/2010
14	Londonderry DAP Victoria Rd Work Package	CSO 46 Prehen Park	UID143	KL448	Closed	29/10/2010
15	Londonderry DAP Victoria Rd Work Package	CSO 47 Prehen Road	UID142	KL448	Closed	29/10/2010
16	Carrickfergus	Shaftsbury park SPS JOYMOUNT	UID163	KR402	Increased storage close sea outfall. New overflow to Sullatober Water Culvert.	01/06/2010
17	Whitehouse	Camross Park CSO	UID164	KR403	New CSO chamber with 6mm screening.	13/04/2010
18	Whitehouse	Merville Mews CSO	UID165	KR403	New CSO chamber with 6mm screening.	13/04/2010
19	Whitehouse	Manse Road CSO	UID166	KR403	Increase height of weir walls	13/04/2010
20	Bangor	Lukes Point	UID174	KR400	Extra storage and 6mm screening	23/06/2010

UIDs Delivered during the second year of PC10 – AIR12 Period

	Catchment	UID Address	FD Reference	Project Id	Comments	Operational Date
1	Belfast	CSO 73 - Annadale Flats	UID096	KR434	Closed	30/03/2012
2	Belfast	CSO 72 - Sunnyside St closure	UID097	KR434	Reduction in spill Frequency.	30/03/2012
3	Belfast	Annadale PS - CSO	UID140	KR434	Abandon Annadale PS Closure of CSO.	30/03/2012
4	Belfast	Sunnyside St. SPS CSO	UID141	KR434	Upgrade PS with increased storage, also 6mm screening and new overflow pipe to River Lagan	30/03/2012
5	Londonderry DAP Duke St Work Package :	Fountain Hill CSO 031	UID104	KL443	Closed	02/12/2011
6	Londonderry DAP Duke St Work Package :	Duke Street PS CSO41	UID105	KL443	Upgrade PS with increased storage and new pumping main to pass forward Formula A. Close CSO.	02/12/2011
7	Londonderry DAP Duke St Work Package :	Queens Quay PS CSO14	UID103	KL443	Pass forward Formula A and 6mm screening.	02/12/2011

	Catchment	UID Address	FD Reference	Project Id	Comments	Operational Date
8	Londonderry DAP Duke St Work Package :	Duke Street New Storm PS CSO63	UID106	KL443	New storm PS to pass forward 280 l/s with 6mm screens and new CSO	02/12/2011
9	Londonderry DAP Duke St Work Package : Flood Alleviation	Victoria Road Old CSO 58	UID109	KL446	Closed	13/12/2011
10	Londonderry DAP Duke St Work Package : Flood Alleviation	Victoria Road New CSO 57	UID110	KL446	Closed	13/12/2011
11	Londonderry DAP Duke St Work Package : Flood Alleviation	King Street RAB CSO 35	UID111	KL446	Restrict pass forward to Formula A , also provide 6mm screening	13/12/2011
12	Belfast	Baroda Street CSO 77	UID144	KR452	New CSO chamber with 6mm screens also weir level in chamber to be increased.	07/09/2011
13	Belfast	Ormeau Park CSO 78	UID145	KR452	New CSO chamber and 6mm screens also new overflow pipe to River Lagan	07/09/2011
14	Newcastle	Murlough SPS - Bonnys Caravan	UID077	KS379	Closed	29/04/2011
15	Newcastle	Murlough SPS CSO 21	UID128	KS379	6mm screens and upgrade of WWPS	29/04/2011
16	Newcastle	Burrendale Hotel CSO 03	UID129	KS379	Closed	29/04/2011
17	Newcastle	Burrendale Hotel No 1 CSO 02	UID130	KS379	Closed	29/04/2011
18	Newcastle	Mourneview CSO 04	UID131	KS379	Closed	29/04/2011
19	Newcastle	Burrenview CSO 05	UID132	KS379	Closed	29/04/2011
20	Newcastle	Shan Slieve Drive CSO 16	UID133	KS379	Closed	29/04/2011
21	Newcastle	South Promenade CSO 18	UID134	KS379	Closed	29/04/2011
22	Belfast	Beechmount Ave/Gortfin St Hydraulic Upgrade CSO 53	UID030	KR432	New CSO chamber and 6mm screens	02/12/2011
23	Belfast	Beechmount Ave/Gortfin - CSO 46	UID118	KR432	New CSO chamber and 6mm screens	02/12/2011
24	Belfast	Beechmount Ave/Gortfin - CSO 47	UID119	KR432	Rebuild and raise outfall pipe level also 6mm screens	02/12/2011
25	Belfast	Fort Street - CSO 50	UID120	KR432	New CSO chamber with 6mm screens. Reconnect outfall pipe from CSO 50 to Clowney River.	02/12/2011
26	Coleraine (Old A0 Coleraine DAP)	Queen St CSO	UID039	KC404	New CSO chamber and 6mm screens and tank sewer for storage	31/01/2012
27	Coleraine (Old A0 Coleraine DAP)	Strand Road PS	UID042	KC404	Upgrade CSO chamber and install 6mm screens	31/01/2012
28	Coleraine (Old A0 Coleraine DAP)	Rose Gardens CSO	UID121	KC404	Closed	31/01/2012
29	Coleraine (Old A0 Coleraine DAP)	Millburn Road CSO	UID122	KC404	Closed	31/01/2012
30	Coleraine (Old A0 Coleraine DAP)	Andersons Park CSO	UID123	KC404	Closed	31/01/2012
31	Belfast	Allexander Road/Castlereagh College CSO 21	UID051	KR441	Upgrade CSO chamber and install 6mm screens	2011/12
32	Belfast	Carnamena Ave/Merok Crescent CSO 28	UID055	KR441	Closed	2011/12
33	Belfast	Clonduff Drive CSO 29	UID160	KR441	Closed	2011/12
34	Belfast	Merok Crescent CSO 27	UID161	KR441	Closed	2011/12
35	Lisburn	Beechlawn PS Hillsborough	UID127	KT138	Upgrade CSO chamber and install 6mm screens also increase storage	30/11/2011

	Catchment	UID Address	FD Reference	Project Id	Comments	Operational Date
36	Downs Rd/Castle Park	Downs Rd CSO	UID078	KS377	New WWPS to pump forward storm flows to Castlepark system. 6mm screens on the ERO	23/01/2012
37	Downs Rd/Castle Park	Castlepark SPS CSO 13	UID135	KS377	Closed	23/01/2012
38	Downs Rd/Castle Park	Valenta Place CSO 11	UID136	KS377	Closed	23/01/2012
39	Downs Rd/Castle Park	Castlepark CSO 12	UID137	KS377	New pumping station and 1900cu m storm attenuation tank with 6mm screens on overflow.	23/01/2012
40	Ballyclare	Ballyeaston SPS	UID159	KA201	Upsize WWPS and install 6mm screens on the overflow	2011/12
41	Bangor (A0 : 5/8/09 Bangor DAP Stage 1 - mentions 18 UIDs) KS878	Sandell Lane SPS	UID024	KS878	Upgrade CSO chamber and install 6mm screens	28/03/2012
42	Bangor (A0 : 5/8/09 Bangor DAP Stage 1 - mentions 18 UIDs) KS878	Coastguard Lane SPS	UID025	KS878	Upgrade CSO chamber and install 6mm screens	28/03/2012
43	Bangor (A0 : 5/8/09 Bangor DAP Stage 1 - mentions 18 UIDs) KS878	Seacliff Rd CSO 21	UID188	KS878	Upgrade CSO chamber and install 6mm screens	28/03/2012

UIDs Delivered during the third year of PC10 – AIR13 Period

	Catchment	UID Address	FD Reference	Project Id	Comments	Operational Date
1	Londonderry DAP: Strathfoyle & Drumahoe Work Package :CSO Abandonments	Cambourne Park CSO	UID156	KL451	Closed	24/09/2012
2	Londonderry DAP: Strathfoyle & Drumahoe Work Package :CSO Abandonments	Rosstowney Road CSO	UID157	KL451	Closed	24/09/2012
3	Londonderry DAP: Strathfoyle & Drumahoe Work Package :CSO Abandonments	Fallowlea Park CSO	UID158	KL451	Closed	24/09/2012
4	Portadown Drainage Area Network Improvements: Obins Street & Park Road	Orbins Street CSO 25	UID087	KG184	Relocated CSO 25 and new overflow to Upper Bann River	31/08/2012
5	Portadown Drainage Area Network Improvements: Obins Street & Park Road	Orbins Street CSO 24	UID088	KG184	Closed	31/08/2012
6	Portadown Drainage Area Network Improvements: Obins Street & Park Road	Railway Station/Park Road	UID138	KG184	Closed	31/08/2012
7	Portadown Drainage Area Network Improvements: Obins Street & Park Road	Orbins Street/Park Road	UID089	KG184	Closed	31/08/2012
8	Kilkeel Harbour WWPS & Sewerage Improvements	Kilkeel Harbour WWPS	UID064	KS807	New location for CSO also upgrade of Pumping main to enable Formula A to be passed forward in the future when extra storage is made available	4/06/2012
9	Kilkeel Harbour WWPS & Sewerage Improvements	Kilkeel Harbour	UID277	KS807	Closed	4/06/2012
10	South Street WWPS, Newtownards	South Street WWPS	UID079	KS835	Provide 6mm screening and increased storage (New WWPS)	28/1/2013
11	Greyabbey DAP Phase 1	Main Street CSO1	UID062	KS812	Closed	24/9/2012
12	Greyabbey DAP Phase 1	Main Street CSO2	UID063	KS812	Closed	24/09/2012

	Catchment	UID Address	FD Reference	Project Id	Comments	Operational Date
13	Londonderry DAP: Buncrana Road Work Package	Racecourse Road CSO	UID235	KL444	Closed	7/05/2012
14	Londonderry DAP: Buncrana Road Work Package	Buncrana Road CSO	UID236	KL444	Closed	7/05/2012
15	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation	Lower Bennett Street CSO	UID146	KL447	Closed	24/09/1012
16	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation	Moat Street CSO	UID147	KL447	Closed	24/09/2012
17	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation	Bridge Street CSO	UID148	KL447	Closed	24/09/2012
18	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation	John Street CSO	UID149	KL447	Closed	24/09/2012
19	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation	Lone Moor Street CSO1	UID150	KL447	New CSO with 6mm screens to enable CSO 1, 2 and 3 to be closed.	24/09/2012
20	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation	Lone Moor Street CSO2	UID151	KL447	Closed	24/09/2012
21	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation	Lone Moor Street CSO3	UID152	KL447	Closed	24/09/2012
22	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation	Letterkenny Road WWPS CSO	UID153	KL447	Closed	24/09/2012
23	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation	Foyle Road WWPS CSO	UID154	KL447	New CSO chamber with 6mm screens	24/09/2012
24	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation	Cashowen CSO	UID155	KL447	Replace CSO with new WWPS with new CSO on storm chamber also new outfall.	24/09/2012
25	Londonderry DAP: Victoria Road Work Package	Victoria Road Storm WWPS CSO64	UID108	KL445	Provision of a new CSO chamber with 6mm screens and an upgrade of existing 450mm overflow pipework originally from Prehen WWPS to the River Foyle with a new 750mm diameter pipeline.	11/10/2010
26	Brookmount Road, Hunters Crescent Sewer Replacement	21 Clontarf Drive CSO	UID249	KN595	Closed	31/05/2011
27	Brookmount Road, Hunters Crescent Sewer Replacement	Tamlaght Road CSO	UID250	KN595	Upgrade OF WWPS Pumping Main	31/05/2011
28	Brookmount Road, Hunters Crescent Sewer Replacement	4 Lambrook Gardens CSO	UID271	KN595	Closed	31/05/2011
29	Brookmount Road, Hunters Crescent Sewer Replacement	Hunters Crescent WWPS	UID270	KN595	Huber Screen fitted	31/05/2011
30	Brookmount Road, Hunters Crescent Sewer Replacement	Creevenagh Road WWPS	UID251	KN595	Upgrade of network which resulted in less spills at WWPS	31/05/2011
31	Annaghanoon Road WWPS Upgrade, Warringstown	Annaghanoon Road WWPS CSO	UID178	KG178	Upgrade of WWPS with increased storage and new overflow with 6mm screens. Formula A storage	5/09/2011
32	Castlewellan WWTW Upgrade	Castlewellan Park CSO	UID034	KV014	Closed	19/08/2010
33	Castlewellan WWTW Upgrade	Castlewellan WWTW, WWPS	UID035	KV014	Closed WWTW and built new WWPS	19/08/2010

	Catchment	UID Address	FD Reference	Project Id	Comments	Operational Date
34	Murlough WWPS Upgrade and Network Improvements	Murlough WWPS ERO	UID278	KS379	Closed	29/04/2011
35	Water Street/Horners Lane Sewer Upgrade Rostrevor	Horners Lane	UID252	KV159	Closed	24/06/2011
36	Newry Sewerage Networks Improvements	Dublin Road	UID262	KV063	Closed	5/09/2011
37	Winters Lane Omagh	Winters Lane	UID244	KN646	Upgraded with 6mm screen	27/03/2013
38	Millisle DAP1	Moss Road CSO	UID075	KR439	Relocate CSO with increased storage.	29/11/2012

Line 24 – Delivery of improvements to WwTW through nominated schemes as part of a defined programme of work

The AIR13 report represents the closure of the PC10 outputs claim and as a result a detailed review of all outputs which have been delivered in the period.

NI Water delivered 10 improvements to WwTW listed within the PE10 monitoring plan within the period, plus 1 additional WwTW, plus a further 4 WwTW arising from a review of the SBP/PC10 closure process, plus 1 site with a PE greater than 250PE reported in programme 17.

This indicates that NI Water has delivered 45 WwTW in programme 16 in the PC10 period. NI Water would also wish to claim a further 11 WwTW greater than 250 PE delivered in programme 17 through RWIP for a final total of 56 WwTW delivered. This is in line with the delivery required in this area within the PE10 monitoring plan. A significant number of other projects have started but have not completed in the period, including KS848 Newcastle WwTW and KL350 Benone WwTW.

PC10 WwTW Outputs Summary Table

Delivery year	10/11	11/12	12/13	Total	Comments
PE10 Nominated Outputs	20	7	9	36	KS253 Drumaness WwTW inlet sewer works completed in 10/11 – nominated in PE10 and noted in the year of completion
Additional Outputs	5	2	2	9	KS374 Darraghs Cross was added to PE10 with date in SBP after being claimed in AIR11. 4 Carryover WwTW completed in 10/11 were not uncovered till NIEA review of PC10 quality outputs in 12/13 – noted in the year of completion. KF028 Keady was in PE10 with a PC13 date but was completed early.
RWIP greater than 250 PE	4	6	1	11	RWIP delivered 11 sites over 250 PE –details are provided within the commentary on line 25 – further review since OMS submission.
Total	29	15	12	56	

Programme 15 Carryover WwTW – projects delivered

Project Code	Project Name	PE10 Monitoring Plan Code
KR391	Portavogie Interim solution (now delivering long term solution)	STW025
KF319	Annaghmore WwTW	N/A
KG145	Derrytrasna WwTW	N/A
KL300	Dungiven WwTW	N/A
KB322	Martinstown WwTW	N/A

KR389 Ballyhalbert interim solution has been delivered with the Long Sea Outfall required to deliver the final solution currently to be completed in 13/14 after significant delays.

The 4 unclaimed projects have been reviewed and have not been claimed in previous AIR returns from either the SBP period or PC10. These completion dates were not nominated in the PC10 Final Determination or the PE10 re-submission and were thus omitted. The omission of these sites was uncovered when the PC10 delivery was reviewed with NIEA for the final outputs submission.

Project Code	Project Name	Completion date	PC Period
KF319	Annaghmore WwTW	27/09/10	PC10
KG145	Derrytrasna WwTW	29/11/10	PC10
KL300	Dungiven WwTW	10/11/10	PC10
KB322	Martinstown WwTW	13/12/10	PC10

A further PE10 nominated output was completed in 10/11, KS253 Drumaness WwTW – which delivered improvements to the inlet sewer of the WwTW. This was assigned an output code of STW/052, whilst not strictly a WwTW completion this is reported in the AIR for completeness.

These projects have been cross checked with the commissioning and completion information to support the CIM and this represents the reported date for the operation of these WwTW.

All these projects had significant carryover spend in the PC10 period and NI Water would contend that these sites should be included as PC10 outputs. They have been recorded in the NI Water CIM submissions across the period.

Programme 16 WwTW

In the PC13 coding structure the UR combined programmes 16 and 21 into programme 16. This AIR return reports on the WwTW delivered in programme 16.

Project Code	Project Name	PE10 Monitoring Plan Code	Original Programme
KC416	Glenstall WwTW nutrient redn	STW037	16
KL465	Limavady WwTW– nutrient redn	STW043	16
KN622	Omagh WwTW – nutrient redn	STW039	16
KF028	Keady WwTW	STW054	21
KV045	Mullaghbane WwTW	STW040	16
KV125	Forkhill WwTW	STW041	16
KF060	Brockagh Terrace/Mountjoy WwTW	STW050	21
KV105	Newry WwTW Phase 1	STW056	21
KB287	Swatragh WwTW	STW058	21
KL482	Tamnaherin WwTW	N/A	21

KI482 Tamnaherin WwTW commenced in 11/12 as part of the projects commenced to meet the 11/12 investment target. This project was discussed with NIEA prior to commencement and NIEA agreed that this project should be delivered in PC10.

This project was not included in the PE10 change process and as such does not have a nominated output designation.

The projects removed from the CIM completions after review of completion, commissioning and discussion with the project managers are:-

Project Code	Project Name	Reason
KR388	Ballywalter WwTW	Lands payments trigger date in CIM – project completed in SBP.
KL386	Gortnahey WwTW	Dates not updated for the CIM
KS175	Moneyreagh WwTW	Final closure payments trigger BU date in CPMR.

This represents an improvement in the accuracy of the CIM and the cleansing of erroneous dates.

Confidence grades

NI Water has improved the reporting process and the cross checking process for this line for the 12/13 AIR submission, without improvements throughout the data chain as outlined in the methodology. The confidence grades for this line were determined using the reporting guidance and were assessed as B3 – based on the evidence within the methodology and the small number of sites claimed.

WwTWs Delivered during the first year of PC10 – AIR11 Period

No.	Output Reference Code	Project Name	Project Code	Beneficial Use Date	Comments
1	STW/003	Ballymonie WwTW	KL393	18/03/2011	Programme 15 Carryover WwTW – projects delivered
2	STW/005	Bushmills Portballintrae WwTW	KC299	06/12/2010	Programme 15 Carryover WwTW – projects delivered
3	STW/006	Cargan WwTW	KB333	30/11/2010	Programme 15 Carryover WwTW – projects delivered
4	STW/007	Cloughmills WwTW	KC284	30/11/2010	Programme 15 Carryover WwTW – projects delivered
5	STW/008	Coagh WwTW	KB284	10/11/2010	Programme 15 Carryover WwTW – projects delivered
6	STW/009	Coalisland WwTW	KF005	01/12/2010	Programme 15 Carryover WwTW – projects delivered
7	STW/010	Downpatrick WwTW	KS224	14/12/2009	Programme 15 Carryover WwTW – projects delivered
8	STW/014	Hook's Corner WwTW	KT125	28/03/2011	Programme 15 Carryover WwTW – projects delivered
9	STW/016	Loughries WwTW	KS307	25/01/2011	Programme 15 Carryover WwTW – projects delivered
10	STW/017	Lurganare WwTW	KV064	30/09/2010	Programme 15 Carryover WwTW – projects delivered
11	STW/018	Maghera WwTW	KB281	03/02/2011	Programme 15 Carryover WwTW – projects delivered. Majority of work to be carried out and completed within PC10 despite PE funding restrictions.
12	STW/019	Magherafelt WwTW	KB282	28/03/2011	Programme 15 Carryover WwTW – projects delivered
13	STW/021	Moneymore WwTW	KB278	18/08/2010	Programme 15 Carryover WwTW – projects delivered
14	STW/024	Newtownbreda WwTW	KR310	04/02/2011	Programme 15 Carryover WwTW – projects delivered
15	STW/026	Rousky Sewerage Scheme	KN533	09/09/2010	Programme 15 Carryover WwTW – projects delivered
16	STW/028	Stewartstown WwTW	KB279	10/11/2010	Programme 15 Carryover WwTW – projects delivered
17	STW/029	Toome (Creagh) Sewerage Scheme [PE's Toome – 1349 Creagh – 605]	KB269	22/03/2011	Programme 15 Carryover WwTW – projects delivered
18	STW/031	Bush WwTW	KF320	03/06/2010	New starts WwTW programme - delivered early
19	STW/038	New Holland WwTW	KT377	28/03/2011	Programme 15 Carryover WwTW – projects delivered. Majority of work to be carried out and completed within PC10 despite PE funding restrictions.
20	STW/045	Darragh Cross WwTW	KS374	07/09/2010	Programme 15 Carryover WwTW – projects delivered This is not listed in the Annex N1

WwTWs Delivered during the second year of PC10 – AIR12 Period

No.	Output Reference Code	Project Name	Project Code	Beneficial Use Date	Comments
21	STW/002	Ballyhalbert WwTW	KR389	28/03/2013	Programme 15 project delivered Ballyhalbert interim solution has been delivered with the Long Sea Outfall required to deliver the final solution scheduled for delivery in 12/13
22	STW/011	Dunmurry WwTW Modifications	KT102	19/03/2012	Programme 15 project delivered
23	STW/023	Mullaghboy WwTW	KA195	04/04/2011	Programme 15 project delivered
24	STW/030	Whitehead, Ballystudder & Ballycarry Rationalisation	KB436	16/02/2012	Programme 15 project delivered
25	STW/013	Feeny WwTWs	KL363	25/11/2011	Programme 15 project delivered
26	STW/051	Causeway Aird	KC338	23/08/2011	This is not listed in the Annex N1 Programme 21 Additional Outputs
27	STW/053	Glassdrumman WwTW	KS857	23/12/2011	This is not listed in the Annex N1 Programme 21 Additional Outputs
28	STW/059	Dunmore Sewerage	KS216	30/06/2011	Dunmore Sewerage - EC Compliance This is not listed in the Annex N1
29	STW/060	Ardrass WwPS	KF329	31/03/2012	Ardrass WwPS (Ardrass WwTW completed) This is not listed in the Annex N1

WwTWs Delivered during the third year of PC10 – AIR13 Period

No.	Output Reference Code	Project Name	Project Code	Beneficial Use Date	Comments
30	STW/025	Portavogie Interim solution.	KR391	24/09/12	Scope change to deliver the final solution
31	STW/037	Glenstall WwTW nutrient redn	KC416	25/02/13	
32	STW/043	Limavady WwTW– nutrient redn	KL465	25/02/13	
33	STW/039	Omagh WwTW – nutrient redn	KN622	25/02/13	
34	STW/054	Keady WwTW	KF028	29/11/12	Includes network CSO in inlet sewer
35	STW/040	Mullaghbane WwTW	KV045	28/03/13	
36	STW/041	Forkhill WwTW	KV125	28/03/13	
37	STW/050	Brockagh Terrace/Mountjoy WwTW	KF060	13/08/12	
38	STW/056	Newry WwTW Phase 1	KV105	28/01/13	
39	STW/058	Swatragh WwTW	KB287	21/03/13	
40	STW/061	Tamnaherin WwTW	KL482	28/01/13	
41	STW/052	Drumaness WwTW	KS253	31/08/10*	Completion of inlet sewer works
42	STW/062	Annaghmore WwTW	KF319	27/09/10*	
43	STW/063	Derrytrasna WwTW	KG145	29/11/10*	
44	STW/064	Dungiven WwTW	KL300	10/11/10*	
45	STW/065	Martinstown WwTW	KB322	13/12/10*	

*Completed in earlier years but not previously claimed.

Claimed under year of completion in Line 24 Summary Table and Table 16.

Line 25 - Investment in improvements to small wastewater treatment works as part of the Rural Wastewater Investment Programme.

This line reports the complete expenditure on the Programme 17 projects which was invested during 12/13.

The main project in the programme was KI516, which invested £3.331m, with KI486 from the previous year investing £0.085m. The remaining £0.018 was made up of lands and other payments required in closure of KA206, KI463 and KX220.

NI Water was able to mobilise the RWIP programme to deliver additional outputs in response to the additional funding provided to NI Water, with small works capable of being completed in the short 6 month timescale. This was highly successful, moving from the estimated 3 sites in 12/13 to an outturn completion of 14 sites under project KI516 to works under 250PE. The works covered are; Cullion, Cross Lane, Knock Terrace, Clanabogan south, Charleston, Leitrim (New), Garvetagh, Springfield, Gortscreagan, Slaght, Lisowen, Macfin, Procklis, and Dempsey Park.

The total delivery for this programme in PC10 is 59 works in total – 48 under 250 PE) and 11 over 250 PE. NI Water increased the investment in this area during the year from the original estimate of around £1m nominal including base maintenance to a total of £3.434m nominal to invest the additional funding offered to NI Water.

The WwTWs over 250PE delivered in the PC10 period under RWIP are shown in the table below:-

No.	Output Reference Code	Name of Works	Current PE	Delivered PE	Year of Beneficial Use
46	STW/066	Annahugh	323	410	2010/2011
47	STW/068	Galbally	407	530	2010/2011
48	STW/067	Maghery	363	410	2010/2011
49	STW/070	Montieth	216	300	2011/2012
50	STW/071	Orritor	291	430	2011/2012
51	STW/072	Garvaghy	131	280	2011/2012
52	STW/069	Donagheady	188	300	2010/2011
53	STW/073	Attical Tullyframe	201	359	2011/2012
54	STW/074	Donagh	234	317	2011/2012
55	STW/076	Glack	235	258	2012/2013
56	STW/075	Teemore	231	341	2011/2012

With the additional funding provided NI Water was able to exceed the PE10 FD target, delivering 48 sites in the under 250PE size band. The 11 other sites with a PE greater than 250 are effectively additional outputs within programme 16 and noted in the commentary on that programme. In the table above, these have been consecutively numbered with the programme 16 WwTW to demonstrate the total numbers.

COP1 was applied to the figures as required by UR in the reporting requirements for AIR 12, reducing the totals to £3.4m in 07/08 prices.

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 previous history of changes and adjustments. As this information is based on two lines within the CIM linked back to CPMR and Oracle financials, with the grade reduced to A2 to accommodate a number of potential Early Warnings on this project with the potential for a change of up to 3% on the total spend.

Table 16 has been updated with correct figures for the PC10 Period.

PC10 CHANGE CONTROL PROCESS 01
NOMINATED OUTPUTS

PC10 CHANGE CONTROL PROCESS 01
TABLE 8 - NOMINATED OUTPUTS

PE10 AIR 13 Output report

Wastewater Treatment Works		
Ref.	Project Name	Drivers
STW001	Ardglass WWTW	UWTR Appropriate Treatment / WOC
STW002	Ballyhabert WWTW	UWTR Appropriate Treatment / WOC
STW003	Ballymore WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish
STW004	Ballywater WWTW	UWTR Appropriate Treatment / WOC / Bathing Water
STW005	Bushmills Portballintrae WWTW	UWTR Appropriate Treatment / WOC / Bathing Water
STW006	Cargan WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish
STW007	Cloaghmills WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish
STW008	Coagh WWTW	WOC / Freshwater Fish
STW009	Coaliland WWTW	WOC / Environmental needs standard / Freshwater Fish
STW010	Downpatrick WWTW	UWTR Sensitive Waters / WOC / Freshwater Fish
STW011	Dunmurry WWTW Modifications	UWTR Sensitive Waters / Nutrient removal / WOC
STW012	Eniskillen WWTW	UWTR / WOC ammonia standard / Freshwater Fish / Flow non compliance
STW013	Feeny WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish
STW014	Hook's Corner WWTW	UWTR / WOC to meet the future environmental needs standard / Freshwater Fish
STW015	Lisburn WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish
STW016	Loughries WWTW	UWTR Appropriate Treatment / WOC
STW017	Lurganare WWTW	WOC to meet the future environmental needs standard
STW018	Maghera WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish
STW019	Magheratell WWTW	WOC ammonia standard / Freshwater Fish / UWTR
STW020	Milbon Armin WWTW	UWTR Sensitive Waters / WOC / Freshwater Fish
STW021	Monymony WWTW	UWTR Appropriate Treatment WOC Freshwater Fish
STW022	Dungannon (Mogasha) WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish
STW023	Mulaghy WWTW	UWTR Appropriate Treatment / WOC
STW024	Newtownbreda WWTW	UWTR Sensitive Waters / Nutrient removal / WOC / Non compliance with flow conditions
STW025	Portlough WWTW / Kirkston	UWTR Appropriate Treatment / WOC
STW026	Rousky Sewerage Scheme	WOC
STW027	Sanfield WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish
STW028	Stewartstown WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish
STW029	Toome (Creagh) Sewerage Scheme (PE's Toome - 1349 Creagh - 408)	UWTR / WOC meet the future environmental needs standard required at Creagh - 408
STW030	Whitehead, Ballyludder & Ballycary Rationalisation	UWTR Appropriate Treatment / WOC / Shellfish Waters
STW031	Bush WWTW	UWTR Appropriate treatment / WOC / Freshwater Fish
STW032	Berone WWTW	Currently fails the UWTR standard
STW033	Maghera WWTW	UWTR Compliance WOC / Freshwater Fish
STW034	Newcastle WWTW	UWTR Sensitive Waters / WOC / Bathing Waters
STW035	Guladuff WWTW	UWTR / WOC to meet the future environmental needs standard / Freshwater Fish
STW036	Ballynry WWTW	UWTR Appropriate treatment / WOC
STW037	Glenstal WWTW	UWTR Sensitive Waters / WOC
STW038	New Holland WWTW	UWTR Sensitive Waters / WOC
STW039	Omagh WWTW	UWTR Sensitive Waters / WOC
STW040	Forkhill WWTW	UWTR / WOC to meet the future environmental needs standard / Freshwater Fish
STW041	Mulaghybane (Forkhill) WWTW	UWTR / WOC to meet the future environmental needs standard / Freshwater Fish
STW042	Hillsborough WWTW	UWTR Appropriate treatment / WOC / Freshwater Fish
STW043	Lisnady WWTW	UWTR Sensitive Waters / WOC
STW044	Small WWTW programme	Continuation of the small wastewater treatment works programme identified in agreement with NEA.
STW045	Darragh Cross WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish
STW046	Ballycristle WWTW	UWTR Appropriate Treatment / WOC / Bathing Waters
STW047	Ballygowan WWTW	WFD/Freshwater Fish/HS2
STW048	Ballymartin & Blackrock WWTWs	UWTR / WOC to meet the future environmental needs standard / Freshwater Fish
STW049	Ballynahinch WWTW	WFD/HS2
STW050	Brookagh Terrace/Mountain WWTW	WFD/Freshwater Fish
STW051	Chatterley/Ard	Supply demand balance - addressing growth requirements of the new Boreen Castaway solar centre
STW052	Drumcress WWTW	Chief executive commitment to improve the operation of the inlet sewers and storm overflow at Drumcress
STW053	Gleadowan WWTW	WFD/Freshwater Fish
STW054	Keady WWTW	WFD/Freshwater Fish
STW055	Monaghan WWTW	TBC
STW056	Nerby WWTW Extension	Supply demand balance
STW057	Stoneyford WWTW	WFD/Supply demand balance
STW058	Rastragh Wastewater Treatment Works	UWTR Appropriate treatment / WOC / Freshwater Fish

Note 1: Stormwater storage to be provided in accordance with the consent conditions where appropriate

Project status					Wastewater Treatment Works			
Project Ref.	New addition	Change	Other change	Ref.	Project Name	Drivers	Justification of change of output (other than delivery date)	
				STW001	Ardglass WWTW	UWTR Appropriate Treatment / WOC	31/03/2013	
				STW002	Ballyhabert WWTW	UWTR Appropriate Treatment / WOC	30/09/2012 - Change of treatment to include Long sea outfall	
				STW003	Ballymore WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	18/03/2011	
				STW004	Ballywater WWTW	UWTR Appropriate Treatment / WOC / Bathing Water	N/A	
				STW005	Bushmills Portballintrae WWTW	UWTR Appropriate Treatment / WOC / Bathing Water	06/12/2010	
				STW006	Cargan WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	22/11/2010	
				STW007	Cloaghmills WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	30/11/2010	
				STW008	Coagh WWTW	WOC / Freshwater Fish	10/11/2010	
				STW009	Coaliland WWTW	WOC / Environmental needs standard / Freshwater Fish	01/12/2010	
				STW010	Downpatrick WWTW	UWTR Sensitive Waters / WOC / Freshwater Fish	26/04/2010	
				STW011	Dunmurry WWTW Modifications	UWTR Sensitive Waters / Nutrient removal / WOC	19/03/2012	
				STW012	Eniskillen WWTW	UWTR / WOC ammonia standard / Freshwater Fish / Flow non compliance	15/06/2009	
				STW013	Feeny WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	31/12/2010 - NEA requested additional storm storage during the construction of the works.	
				STW014	Hook's Corner WWTW	UWTR / WOC to meet the future environmental needs standard / Freshwater Fish	28/03/2011	
				STW015	Lisburn WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	25/02/2010	
				STW016	Loughries WWTW	UWTR Appropriate Treatment / WOC	01/02/2011	
				STW017	Lurganare WWTW	WOC to meet the future environmental needs standard	30/09/2010	
				STW018	Maghera WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	03/02/2011	
				STW019	Magheratell WWTW	WOC ammonia standard / Freshwater Fish / UWTR	28/03/2011	
				STW020	Milbon Armin WWTW	UWTR Sensitive Waters / WOC / Freshwater Fish	11/02/2010	
				STW021	Monymony WWTW	UWTR Appropriate Treatment WOC Freshwater Fish	25/10/2010 - NEA reduced the ammonia standard to 4 after changing the status of the receiving watercourse during construction.	
				STW022	Dungannon (Mogasha) WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	31/03/2010	
				STW023	Mulaghy WWTW	UWTR Appropriate Treatment / WOC	04/04/2010	
				STW024	Newtownbreda WWTW	UWTR Sensitive Waters / Nutrient removal / WOC / Non compliance with flow conditions	05/03/2012	
				STW025	Portlough WWTW / Kirkston	UWTR Appropriate Treatment / WOC	31/12/2011	
				STW026	Rousky Sewerage Scheme	WOC	10/05/2010	
				STW027	Sanfield WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	03/03/2010 - NEA requested additional storm storage after a change in designation of the receiving watercourse.	
				STW028	Stewartstown WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	20/12/2010	
				STW029	Toome (Creagh) Sewerage Scheme (PE's Toome - 1349 Creagh - 408)	UWTR / WOC meet the future environmental needs standard required at Creagh - 408	20/03/2011	
				STW030	Whitehead, Ballyludder & Ballycary Rationalisation	UWTR Appropriate Treatment / WOC / Shellfish Waters	31/03/2012	
				STW031	Bush WWTW	UWTR Appropriate treatment / WOC / Freshwater Fish	03/06/2010	
				STW032	Berone WWTW	Currently fails the UWTR standard	31/03/2014	
				STW033	Maghera WWTW	UWTR Compliance WOC / Freshwater Fish	31/03/2013	
				STW034	Newcastle WWTW	UWTR Sensitive Waters / WOC / Bathing Waters	30/05/2013	
				STW035	Guladuff WWTW	UWTR / WOC to meet the future environmental needs standard / Freshwater Fish	31/03/2013	
				STW036	Ballynry WWTW	UWTR Appropriate treatment / WOC	31/03/2014	
				STW037	Glenstal WWTW	UWTR Sensitive Waters / WOC	16/03/2012	
				STW038	New Holland WWTW	UWTR Sensitive Waters / WOC	31/03/2011	
				STW039	Omagh WWTW	UWTR Sensitive Waters / WOC	16/03/2012	
				STW040	Forkhill WWTW	UWTR / WOC to meet the future environmental needs standard / Freshwater Fish	30/06/2012	
				STW041	Mulaghybane (Forkhill) WWTW	UWTR / WOC to meet the future environmental needs standard / Freshwater Fish	30/06/2012	
				STW042	Hillsborough WWTW	UWTR Appropriate treatment / WOC / Freshwater Fish	31/03/2013	
				STW043	Lisnady WWTW	UWTR Sensitive Waters / WOC	16/03/2012	
				STW044	Small WWTW programme	Continuation of the small wastewater treatment works programme identified in agreement with NEA.	n/a	
				STW045	Darragh Cross WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	Additional Project not claimed in SBP period	
				STW046	Ballycristle WWTW	UWTR Appropriate Treatment / WOC / Bathing Waters	Additional output project - formally added as part of PE Change process - BU - 31/03/2014	
				STW047	Ballygowan WWTW	WFD/Freshwater Fish/HS2	Additional output project - formally added as part of PE Change process - BU - 28/03/2014	
				STW048	Ballymartin & Blackrock WWTWs	UWTR / WOC to meet the future environmental needs standard / Freshwater Fish	Additional output project - formally added as part of PE Change process - BU - 31/03/2013	
				STW049	Ballynahinch WWTW	WFD/HS2	Additional output project - formally added as part of PE Change process - BU - 28/02/2014	
				STW050	Brookagh Terrace/Mountain WWTW	WFD/Freshwater Fish	Additional output project - formally added as part of PE Change process - BU - 31/03/2012	
				STW051	Chatterley/Ard	Supply demand balance - addressing growth requirements of the new Boreen Castaway solar centre	Additional output project - formally added as part of PE Change process - BU - 31/03/2011	
				STW052	Drumcress WWTW	Chief executive commitment to improve the operation of the inlet sewers and storm overflow at Drumcress	Additional output project - formally added as part of PE Change process - BU - 31/03/2011	
				STW053	Gleadowan WWTW	WFD/Freshwater Fish	Additional output project - formally added as part of PE Change process - BU - 31/12/2011	
				STW054	Keady WWTW	WFD/Freshwater Fish	Additional output project - formally added as part of PE Change process - BU - 30/06/2013	
				STW055	Monaghan WWTW	TBC	Additional output project - formally added as part of PE Change process - BU - TBC	
				STW056	Nerby WWTW Extension	Supply demand balance	Additional output project - formally added as part of PE Change process - BU - 30/09/2012	
				STW057	Stoneyford WWTW	WFD/Supply demand balance	Additional output project - formally added as part of PE Change process - BU - 31/03/2013	
				STW058	Rastragh Wastewater Treatment Works	UWTR Appropriate treatment / WOC / Freshwater Fish	Additional output project - formally added as part of PE Change process - BU - 31/03/2013	

Note 1: Stormwater storage to be provided in accordance with the consent conditions where appropriate

Project status					Wastewater Treatment Works				Justification of change of output (other than delivery date)		Comments
Project Ref.	No change	Date change	Content or other change	New addition	Ref.	Project Name	Drivers	Justification of change of output (other than delivery date)			
				Y	STW001	Ardglass WWTW	UWTR Appropriate Treatment / WOC	PC13			
					STW002	Ballyhabert WWTW	UWTR Appropriate Treatment / WOC	30/09/2012			Long Sea Outfall to deliver final solution not completed in PC10/see PC13 delivery
					STW003	Ballymore WWTW	UWTR Appropriate Treatment / WOC	18/03/2011			
					STW004	Ballywater WWTW	UWTR Appropriate Treatment / WOC / Bathing Water	N/A			
					STW005	Bushmills Portballintrae WWTW	UWTR Appropriate Treatment / WOC / Bathing Water	06/12/2010			
					STW006	Cargan WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	30/11/2010			
					STW007	Cloaghmills WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	30/11/2010			
					STW008	Coagh WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	10/11/2010			
					STW009	Coaliland WWTW	WOC / Environmental needs standard / Freshwater Fish	01/12/2010			
					STW010	Downpatrick WWTW	UWTR Sensitive Waters / WOC / Freshwater Fish	14/12/2009			
					STW011	Dunmurry WWTW Modifications	UWTR Sensitive Waters / Nutrient removal / WOC	19/03/2012			
					STW012	Eniskillen WWTW	UWTR / WOC ammonia standard / Freshwater Fish / Flow non compliance	15/06/2009			
					STW013	Feeny WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	25/11/2010			NEA requested additional storm storage during the construction of the works. Dates aligned with AIR
					STW014	Hook's Corner WWTW	UWTR / WOC to meet the future environmental needs standard / Freshwater Fish	28/03/2011			
					STW015	Lisburn WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	25/02/2010			
					STW016	Loughries WWTW	UWTR Appropriate Treatment / WOC	25/01/2011			
					STW017	Lurganare WWTW	WOC to meet the future environmental needs standard	30/09/2010			
					STW018	Maghera WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	03/02/2011			
					STW019	Magheratell WWTW	WOC ammonia standard / Freshwater Fish / UWTR	28/03/2011			
					STW020	Milbon Armin WWTW	UWTR Sensitive Waters / WOC / Freshwater Fish	11/02/2010			SBP output
					STW021	Monymony WWTW	UWTR Appropriate Treatment WOC Freshwater Fish	25/10/2010			- NEA reduced the ammonia standard to 4 after changing the status of the receiving watercourse during construction. SBP output
					STW022	Dungannon (Mogasha) WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	31/03/2010			
					STW023	Mulaghy WWTW	UWTR Appropriate Treatment / WOC	04/04/2010			
					STW024	Newtownbreda WWTW	UWTR Sensitive Waters / Nutrient removal / WOC / Non compliance with flow conditions	05/03/2012			Change of completion date - aligned with AIR
					STW025	Portlough WWTW / Kirkston	UWTR Appropriate Treatment / WOC	31/12/2011			Earlier than expected BU
					STW026	Rousky Sewerage Scheme	WOC	10/05/2010			Change of completion date - aligned with AIR
					STW027	Sanfield WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	03/03/2010 - NEA requested additional storm storage after a change in designation of the receiving watercourse.			SBP output
					STW028	Stewartstown WWTW	UWTR Appropriate Treatment / WOC / Freshwater Fish	20/12/2010			Change of completion date - aligned with AIR
					STW029	Toome (Creagh) Sewerage Scheme (PE's Toome - 1349 Creagh - 408)	UWTR / WOC meet the future environmental needs standard required at Creagh - 408	22/03/2011			Change of completion date - aligned with AIR
					STW030	Whitehead, Ballyludder & Ballycary Rationalisation	UWTR Appropriate Treatment / WOC / Shellfish Waters	31/03/2012			Change of completion date - aligned with AIR
					STW031	Bush WWTW	UWTR Appropriate treatment / WOC / Freshwater Fish	03/06/2010			
					STW032	Berone WWTW	Currently fails the UWTR standard	31/03/2014			Projected completion in PC13

Unsatisfactory Interim Discharges		
Ref.	Project Name	Drivers
UID001	Armagh (HUARMSOLN001) - Storm King CSO	closure
UID002	Armagh (HUARMSOLN001) - Scotch street CSO	closure
UID003	Armagh (HUARMSOLN001) - Courthouse 1 CSO	closure
UID004	Armagh (HUARMSOLN001) - Courthouse 2 CSO	closure
UID005	Armagh (HUARMSOLN006) - The Mill East CSO	closure
UID006	Armagh (HUARMSOLN005) - English Street CSO	closure
UID007	Armagh (ENARMSOLN003) - Drumcarr SPS	Aesthetic - Screening
UID008	Armagh (ENARMSOLN005/HUARMSOLN010) - Milford SPS	Aesthetic - Screening
UID009	Armagh (ENARMSOLN002/HUARMSOLN012) - Killylea Road SPS	Aesthetic - Screening
UID010	Armagh (ENARMSOLN004/HUARMSOLN007) - Newry Road SPS	Aesthetic - Screening
UID011	Bangor (Scheme 1) - Cantles CSO 01	Coastal - three spills and screen.
UID012	Bangor (Scheme 1) - Killybeg PS 03	Inland - Scottish Development Solution and screens
UID013	Bangor (Scheme 2) - Westburn Crescent 25-27 CSO 03A	Inland - Scottish Development Solution and screens
UID014	Bangor (Scheme 2) - Crawfordburn Rd 18 CSO 03B	Inland - Scottish Development Solution and screens
UID015	Bangor (Scheme 2) - Crawfordburn Rd 25 CSO 03 C	Inland - Scottish Development Solution and screens
UID016	Bangor (Scheme 3) - Maxwell CSO 04	Aesthetic - Screening
UID017	Bangor (Scheme 3) - Glen Rd PS 05	Coastal - Three spills and screen.
UID018	Bangor (Scheme 4) - Somerset Ave CSO 11	Coastal - Three spills and screen.
UID019	Bangor (Scheme 4) - Bridge St CSO 13	Coastal - Three spills and screen.
UID020	Bangor (Scheme 4) - Quay St CSO 14	Coastal - Three spills and screen.
UID021	Bangor (Scheme 4) - Terryson CSO 10	Coastal - Three spills and screen.
UID022	Bangor (Scheme 4) - Queens parade CSO 12	Coastal - Three spills and screen.
UID023	Bangor (Scheme 5) - Castle Park CSO 07	Inland - SDO solutions and screens.
UID024	Bangor (scheme 8) - Sander Lane SPS	Aesthetic - provide Screens.
UID025	Bangor (scheme 8) - Coastgard Larne SPS	Aesthetic - provide Screens.
UID026	Ballygally (unknown) - to be determined	to be determined.
UID027	Ballygally (unknown) - to be determined	to be determined.
UID028	Ballygally (unknown) - to be determined	to be determined.
UID029	Ballygally (unknown) - to be determined	to be determined.
UID030	Belfast (Beechmount Avenue Gorfin Street Hydraulic upgrade) - CSO 53	To be confirmed by NEA when water Quality impact modelling complete
UID031	Castellellan (ENCWNCOLN002) - Ballylough Road CSO 02	Aesthetic - Screening
UID032	Castellellan (HUCWNCOLN009) - Annesborough Pk SPS CSO 05	Inland - increase SDO storage
UID033	Castellellan (ENCWNCOLN001) - Mill Hill CSO 04	Aesthetic - Screening
UID034	Castellellan (ENCWNCOLN004) - Castellellan Park CSO 03	closure
UID035	Castellellan (ENCWNCOLN004) - Castellellan WWTW SPS CSO 06	Inland - storage.
UID036	Castellellan (ENCWNCOLN003) - Annesborough Park CSO 01	Provide screens and relocate.
UID037	Cookstown (Moneyre Road Cookstown Sewerage Scheme) - Malesworth Rd CSO	Closure
UID038	Cookstown (Moneyre Road Cookstown Sewerage Scheme) - WWTW Inlet CSO	Closure
UID039	Coleraine (DAP Phase 1) - Queens at CSO 02a	reduce spills and screen
UID040	Coleraine (DAP Phase 1) - Ballysilly CSO 05a	Inland - storage and screening
UID041	Coleraine (DAP Phase 1) - Ballycraig Playing fields CSO 08a	change discharge location
UID042	Coleraine (DAP Phase 1) - Strand Road PS ERO PS 02a	aesthetic - mechanical screening
UID043	Coleraine (DAP Phase 1) - Screen Road CSO 07a	aesthetic - mechanical screening
UID044	Downpatrick (Market Street SPS upgrade)	20mm solid separation relocation from plank drain to quole river online storage
UID045	Downpatrick stream st. CSO	Inland closure 1400mm3 storage and online storage.
UID046	Downpatrick (Churck street SPS upgrade) - CSO 3 meadowlands	Inland - future formula A or closure
UID047	Downpatrick (Churck street SPS upgrade) - Church street PS CSO	Inland - future formula A or closure. 1600mm3 storage
UID048	Downpatrick (Churck street SPS upgrade) - CSO 4 scotch street	Inland - future formula A or closure
UID049	Downpatrick (Churck street SPS upgrade) - CSO 11 scotch street	Inland - future formula A or closure
UID050	Downpatrick (Churck street SPS upgrade) - CSO 12 Rathel Terrace	Inland - future formula A or closure
UID051	East Belfast (Loop Interceptor sewer from east Belfast) - Alexander Road CSO 21	To be confirmed by NEA when water Quality impact modelling complete
UID052	East Belfast (Loop Interceptor sewer from east Belfast) - Woodcut Avenue CSO 24	To be confirmed by NEA when water Quality impact modelling complete
UID053	East Belfast (Loop Interceptor sewer from east Belfast) - Bells Bridge CSO 20	To be confirmed by NEA when water Quality impact modelling complete
UID054	East Belfast (Loop Interceptor sewer from east Belfast) - Rosetta park/Knockbrea Road CSO 18	To be confirmed by NEA when water Quality impact modelling complete
UID055	East Belfast (Loop Interceptor sewer from east Belfast) - Carranmore Avenue CSO 28	To be confirmed by NEA when water Quality impact modelling complete
UID056	East Belfast (Loop Interceptor sewer from east Belfast) - Clonduff Drive CSO 29	To be confirmed by NEA when water Quality impact modelling complete
UID057	East Belfast (Loop Interceptor sewer from east Belfast) - Merok Crescent CSO 27	To be confirmed by NEA when water Quality impact modelling complete
UID058	East Belfast (Loop Interceptor sewer from east Belfast) - Aberta Parade CSO 23	To be confirmed by NEA when water Quality impact modelling complete
UID059	East Belfast (Loop Interceptor sewer from east Belfast) - Manderson Street Duffins Yard CSO 36	To be confirmed by NEA when water Quality impact modelling complete
UID060	East Belfast (Loop Interceptor sewer from east Belfast) - Holywood Road CSO 37	To be confirmed by NEA when water Quality impact modelling complete
UID061	East Belfast (Loop Interceptor sewer from east Belfast) - Ladies Drive CSO 108	To be confirmed by NEA when water Quality impact modelling complete
UID062	East Belfast (Loop Interceptor sewer from east Belfast) - Manderson Street CSO 111	To be confirmed by NEA when water Quality impact modelling complete
UID063	East Belfast (Loop Interceptor sewer from east Belfast) - Prince Regent Ave CSO 109	To be confirmed by NEA when water Quality impact modelling complete
UID064	Greyabbey (DAP Phase 1) - Main at CSO 01	closure
UID065	Greyabbey (DAP Phase 1) - Main at CSO 02	closure

Project status			Unsatisfactory Interim Discharges			Justification of change of output (other than delivery date)		
Project Ref.	New addition	Delisted	Ref.	Project Name	Drivers	Ref.	Project Name	Drivers
KF330	Y		UID001	Armagh (HUARMSOLN001) - Storm King CSO	closure	UID001	Armagh (HUARMSOLN001) - Storm King CSO	closure
KF330	Y		UID002	Armagh (HUARMSOLN001) - Scotch street CSO	closure	UID002	Armagh (HUARMSOLN001) - Scotch street CSO	closure
KF330	Y		UID003	Armagh (HUARMSOLN001) - Courthouse 1 CSO	closure	UID003	Armagh (HUARMSOLN001) - Courthouse 1 CSO	closure
KF330	Y		UID004	Armagh (HUARMSOLN001) - Courthouse 2 CSO	closure	UID004	Armagh (HUARMSOLN001) - Courthouse 2 CSO	closure
KF330	Y		UID005	Armagh (HUARMSOLN006) - The Mill East CSO	closure	UID005	Armagh (HUARMSOLN006) - The Mill East CSO	closure
KF330	Y		UID006	Armagh (HUARMSOLN005) - English Street CSO	closure	UID006	Armagh (HUARMSOLN005) - English Street CSO	closure
KF330	Y		UID007	Armagh (ENARMSOLN003) - Drumcarr SPS	Aesthetic - Screening	UID007	Armagh (ENARMSOLN003) - Drumcarr SPS	Aesthetic - Screening
KF330	Y		UID008	Armagh (ENARMSOLN005/HUARMSOLN010) - Milford SPS	Aesthetic - Screening	UID008	Armagh (ENARMSOLN005/HUARMSOLN010) - Milford SPS	Aesthetic - Screening
KF330	Y		UID009	Armagh (ENARMSOLN002/HUARMSOLN012) - Killylea Road SPS	Aesthetic - Screening	UID009	Armagh (ENARMSOLN002/HUARMSOLN012) - Killylea Road SPS	Aesthetic - Screening
KF330	Y		UID010	Armagh (ENARMSOLN004/HUARMSOLN007) - Newry Road SPS	Aesthetic - Screening	UID010	Armagh (ENARMSOLN004/HUARMSOLN007) - Newry Road SPS	Aesthetic - Screening
KS872	Y		UID011	Bangor (Scheme 1) - Cantles CSO 01	Coastal - three spills and screen.	UID011	Bangor (Scheme 1) - Cantles CSO 01	Coastal - three spills and screen.
KS872	Y		UID012	Bangor (Scheme 1) - Killybeg PS 03	Inland - Scottish Development Solution and screens	UID012	Bangor (Scheme 1) - Killybeg PS 03	Inland - Scottish Development Solution and screens
KS873	Y		UID013	Bangor (Scheme 2) - Westburn Crescent 25-27 CSO 03A	Inland - Scottish Development Solution and screens	UID013	Bangor (Scheme 2) - Westburn Crescent 25-27 CSO 03A	Inland - Scottish Development Solution and screens
KS873	Y		UID014	Bangor (Scheme 2) - Crawfordburn Rd 18 CSO 03B	Inland - Scottish Development Solution and screens	UID014	Bangor (Scheme 2) - Crawfordburn Rd 18 CSO 03B	Inland - Scottish Development Solution and screens
KS873	Y		UID015	Bangor (Scheme 2) - Crawfordburn Rd 25 CSO 03 C	Inland - Scottish Development Solution and screens	UID015	Bangor (Scheme 2) - Crawfordburn Rd 25 CSO 03 C	Inland - Scottish Development Solution and screens
KS874	Y		UID016	Bangor (Scheme 3) - Maxwell CSO 04	Aesthetic - Screening	UID016	Bangor (Scheme 3) - Maxwell CSO 04	Aesthetic - Screening
KS874	Y		UID017	Bangor (Scheme 3) - Glen Rd PS 05	Coastal - Three spills and screen.	UID017	Bangor (Scheme 3) - Glen Rd PS 05	Coastal - Three spills and screen.
KS879	Y		UID018	Bangor (Scheme 4) - Somerset Ave CSO 11	Coastal - Three spills and screen.	UID018	Bangor (Scheme 4) - Somerset Ave CSO 11	Coastal - Three spills and screen.
KS879	Y		UID019	Bangor (Scheme 4) - Bridge St CSO 13	Coastal - Three spills and screen.	UID019	Bangor (Scheme 4) - Bridge St CSO 13	Coastal - Three spills and screen.
KS879	Y		UID020	Bangor (Scheme 4) - Quay St CSO 14	Coastal - Three spills and screen.	UID020	Bangor (Scheme 4) - Quay St CSO 14	Coastal - Three spills and screen.
KS879	Y		UID021	Bangor (Scheme 4) - Terryson CSO 10	Coastal - Three spills and screen.	UID021	Bangor (Scheme 4) - Terryson CSO 10	Coastal - Three spills and screen.
KS879	Y		UID022	Bangor (Scheme 4) - Queens parade CSO 12	Coastal - Three spills and screen.	UID022	Bangor (Scheme 4) - Queens parade CSO 12	Coastal - Three spills and screen.
KS877	Y		UID023	Bangor (Scheme 5) - Castle Park CSO 07	Inland - SDO solutions and screens.	UID023	Bangor (Scheme 5) - Castle Park CSO 07	Inland - SDO solutions and screens.
KS878	Y		UID024	Bangor (scheme 8) - Sander Lane SPS	Aesthetic - provide Screens.	UID024	Bangor (scheme 8) - Sander Lane SPS	Aesthetic - provide Screens.
KS878	Y		UID025	Bangor (scheme 8) - Coastgard Larne SPS	Aesthetic - provide Screens.	UID025	Bangor (scheme 8) - Coastgard Larne SPS	Aesthetic - provide Screens.
KA218	Y		UID026	Ballygally (unknown) - to be determined	to be determined.	UID026	Ballygally (unknown) - to be determined	to be determined.
KA218	Y		UID027	Ballygally (unknown) - to be determined	to be determined.	UID027	Ballygally (unknown) - to be determined	to be determined.
KA218	Y		UID028	Ballygally (unknown) - to be determined	to be determined.	UID028	Ballygally (unknown) - to be determined	to be determined.
KA218	Y		UID029	Ballygally (unknown) - to be determined	to be determined.	UID029	Ballygally (unknown) - to be determined	to be determined.
KR440	Y		UID029	Ballywater (DAP stage)1 - Main St CSO1	Closure.	UID029	Ballywater (DAP stage)1 - Main St CSO1	Closure.
KR432	Y		UID030	Belfast (Beechmount Avenue Gorfin Street Hydraulic upgrade) - CSO 53	To be confirmed by NEA when water Quality impact modelling complete	UID030	Belfast (Beechmount Avenue Gorfin Street Hydraulic upgrade) - CSO 53	To be confirmed by NEA when water Quality impact modelling complete
KR432	Y		UID118	Belfast (Beechmount Avenue Gorfin Street Hydraulic upgrade) - CSO 46	To be confirmed by NEA when water Quality impact modelling complete	UID118	Belfast (Beechmount Avenue Gorfin Street Hydraulic upgrade) - CSO 46	To be confirmed by NEA when water Quality impact modelling complete
KR432	Y		UID119	Belfast (Beechmount Avenue Gorfin Street Hydraulic upgrade) - CSO 47	To be confirmed by NEA when water Quality impact modelling complete	UID119	Belfast (Beechmount Avenue Gorfin Street Hydraulic upgrade) - CSO 47	To be confirmed by NEA when water Quality impact modelling complete
KR432	Y		UID120	Belfast (Beechmount Avenue Gorfin Street Hydraulic upgrade) - CSO 50 - Fort Street	To be confirmed by NEA when water Quality impact modelling complete	UID120	Belfast (Beechmount Avenue Gorfin Street Hydraulic upgrade) - CSO 50 - Fort Street	To be confirmed by NEA when water Quality impact modelling complete
KV161	Y		UID031	Castellellan (ENCWNCOLN002) - Ballylough Road CSO 02	Aesthetic - Screening	UID031	Castellellan (ENCWNCOLN002) - Ballylough Road CSO 02	Aesthetic - Screening
KV161	Y		UID032	Castellellan (HUCWNCOLN009) - Annesborough Pk SPS CSO 05	Inland - increase SDO storage	UID032	Castellellan (HUCWNCOLN009) - Annesborough Pk SPS CSO 05	Inland - increase SDO storage
KV161	Y		UID033	Castellellan (ENCWNCOLN001) - Mill Hill CSO 04	Aesthetic - Screening	UID033	Castellellan (ENCWNCOLN001) - Mill Hill CSO 04	Aesthetic - Screening
KV161	Y		UID034	Castellellan (ENCWNCOLN004) - Castellellan Park CSO 03	closure	UID034	Castellellan (ENCWNCOLN004) - Castellellan Park CSO 03	closure
KV161	Y		UID035	Castellellan (ENCWNCOLN004) - Castellellan WWTW SPS CSO 06	Inland - storage.	UID035	Castellellan (ENCWNCOLN004) - Castellellan WWTW SPS CSO 06	Inland - storage.
KV161	Y		UID036	Castellellan (ENCWNCOLN003) - Annesborough Park CSO 01	Provide screens and relocate.	UID036	Castellellan (ENCWNCOLN003) - Annesborough Park CSO 01	Provide screens and relocate.
KB441	Y		UID037	Cookstown (Moneyre Road Cookstown Sewerage Scheme) - Malesworth Rd CSO	Closure	UID037	Cookstown (Moneyre Road Cookstown Sewerage Scheme) - Malesworth Rd CSO	Closure
KB441	Y		UID038	Cookstown (Moneyre Road Cookstown Sewerage Scheme) - WWTW Inlet CSO	Closure	UID038	Cookstown (Moneyre Road Cookstown Sewerage Scheme) - WWTW Inlet CSO	Closure
KC404	Y		UID039	Coleraine (DAP Phase 1) - Queens at CSO 02a	reduce spills and screen	UID039	Coleraine (DAP Phase 1) - Queens at CSO 02a	reduce spills and screen
KC415	Y		UID040	Coleraine (DAP Phase 1) - Ballysilly CSO 05a	Inland - storage and screening	UID040	Coleraine (DAP Phase 1) - Ballysilly CSO 05a	Inland - storage and screening
KC404	Y		UID041	Coleraine (DAP Phase 1) - Ballycraig Playing fields CSO 08a	change discharge location	UID041	Coleraine (DAP Phase 1) - Ballycraig Playing fields CSO 08a	change discharge location
KC404	Y		UID042	Coleraine (DAP Phase 1) - Strand Road PS ERO PS 02a	aesthetic - mechanical screening	UID042	Coleraine (DAP Phase 1) - Strand Road PS ERO PS 02a	aesthetic - mechanical screening
KC404	Y		UID043	Coleraine (DAP Phase 1) - Screen Road CSO 07a	aesthetic - mechanical screening	UID043	Coleraine (DAP Phase 1) - Screen Road CSO 07a	aesthetic - mechanical screening
KC404	Y		UID121	Coleraine (DAP Phase 1) - Rose Gardens CSO	aesthetic - mechanical screening	UID121	Coleraine (DAP Phase 1) - Rose Gardens CSO	aesthetic - mechanical screening
KC404	Y		UID122	Coleraine (DAP Phase 1) - Millburn Road CSO	aesthetic - mechanical screening	UID122	Coleraine (DAP Phase 1) - Millburn Road CSO	aesthetic - mechanical screening
KC404	Y		UID123	Coleraine (DAP Phase 1) - Andersons Park CSO	aesthetic - mechanical screening	UID123	Coleraine (DAP Phase 1) - Andersons Park CSO	aesthetic - mechanical screening
KS372	Y		UID044	Downpatrick (Market Street SPS upgrade)	20mm solid separation relocation from plank drain to quole river online storage	UID044	Downpatrick (Market Street SPS upgrade)	20mm solid separation relocation from plank drain to quole river online storage
KS374	Y		UID045	Downpatrick stream st. CSO	Inland closure 1400mm3 storage and online storage.	UID045	Downpatrick stream st. CSO	Inland closure 1400mm3 storage and online storage.
KS374	Y		UID124	Hunters Mill attenuation	PC13 delivery - subject to agreement of PC13 funding.	UID124	Hunters Mill attenuation	PC13 delivery - subject to agreement of PC13 funding.
KS374	Y		UID125	Saul Road	PC13 delivery - subject to agreement of PC13 funding.	UID125	Saul Road	PC13 delivery - subject to agreement of PC13 funding.
KS374	Y		UID126	Vanstown Road	PC13 delivery - subject to agreement of PC13 funding.	UID126	Vanstown Road	PC13 delivery - subject to agreement of PC13 funding.
KS373	Y		UID046	Downpatrick (Churck street SPS upgrade) - CSO 3 meadowlands	Inland - future formula A or closure	UID046	Downpatrick (Churck street SPS upgrade) - CSO 3 meadowlands	Inland - future formula A or closure
KS373	Y		UID047	Downpatrick (Churck street SPS upgrade) - Church street PS CSO	Inland - future formula A or closure. 1600mm3 storage	UID047	Downpatrick (Churck street SPS upgrade) - Church street PS CSO	Inland - future formula A or closure. 1600mm3 storage
KS373	Y		UID048	Downpatrick (Churck street SPS upgrade) - CSO 4 scotch street	Inland - future formula A or closure	UID048	Downpatrick (Churck street SPS upgrade) - CSO 4 scotch street	Inland - future formula A or closure
KS373	Y		UID049	Downpatrick (Churck street SPS upgrade) - CSO 11 scotch street	Inland - future formula A or closure	UID049	Downpatrick (Churck street SPS upgrade) - CSO 11 scotch street	Inland - future formula A or closure
KS373	Y		UID050	Downpatrick (Churck street SPS upgrade) - CSO 12 Rathel Terrace	Inland - future formula A or closure	UID050	Downpatrick (Churck street SPS upgrade) - CSO 12 Rathel Terrace	Inland - future formula A or closure
KR441	Y		UID051	East Belfast (Loop Interceptor sewer from east Belfast) - Alexander Road CSO 21	To be confirmed by NEA when water Quality impact modelling complete	UID051	East Belfast (Loop Interceptor sewer from east Belfast) - Alexander Road CSO 21	To be confirmed by NEA when water Quality impact modelling complete
KR448	Y		UID052	East Belfast (Loop Interceptor sewer from east Belfast) - Woodcut Avenue CSO 24	To be confirmed by NEA when water Quality impact modelling complete	UID052	East Belfast (Loop Interceptor sewer from east Belfast) - Woodcut Avenue CSO 24	To be confirmed by NEA when water Quality impact modelling complete
KR444	Y		UID053	East Belfast (Loop Interceptor sewer from east Belfast) - Bells Bridge CSO 20	To be confirmed by NEA when water Quality impact modelling complete	UID053	East Belfast (Loop Interceptor sewer from east Belfast) - Bells Bridge CSO 20	To be confirmed by NEA when water Quality impact modelling complete
KR449	Y		UID054	East Belfast (Loop Interceptor sewer from east Belfast) - Rosetta park/Knockbrea Road CSO 18	To be confirmed by NEA when water Quality impact modelling complete	UID054	East Belfast (Loop Interceptor sewer from east Belfast) - Rosetta park/Knockbrea Road CSO 18	To be confirmed by NEA when water Quality impact modelling complete
KR441	Y		UID055	East Belfast (Loop Interceptor sewer from east Belfast) - Carranmore Avenue CSO 28	To be confirmed by NEA when water Quality impact modelling complete	UID055	East Belfast (Loop Interceptor sewer from east Belfast) - Carranmore Avenue CSO 28	To be confirmed by NEA when water Quality impact modelling complete
KR441	Y		UID160	East Belfast (Loop Interceptor sewer from east Belfast) - Clonduff Drive CSO 29	To be confirmed by NEA when water Quality impact modelling complete	UID160	East Belfast (Loop Interceptor sewer from east Belfast) - Clonduff Drive CSO 29	To be confirmed by NEA when water Quality impact modelling complete
KR441	Y		UID161	East Belfast (Loop Interceptor sewer from east Belfast) - Merok Crescent CSO 27	To be confirmed by NEA when water Quality impact modelling complete	UID161	East Belfast (Loop Interceptor sewer from east Belfast) - Merok Crescent CSO 27	To be confirmed by NEA when water Quality impact modelling complete
KR448	Y		UID056	East Belfast (Loop Interceptor sewer from east Belfast) - Aberta Parade CSO 23	To be confirmed by NEA when water Quality impact modelling complete	UID056	East Belfast (Loop Interceptor sewer from east Belfast) - Aberta Parade CSO 23	To be confirmed by NEA when water Quality impact modelling complete
KR449	Y		UID057	East Belfast (Loop Interceptor sewer from east Belfast) - Manderson Street Duffins Yard CSO 36	To be confirmed by NEA when water Quality impact modelling complete	UID057	East Belfast (Loop Interceptor sewer from east Belfast) - Manderson Street Duffins Yard CSO 36	To be confirmed by NEA when water Quality impact modelling complete
KR444	Y		UID058	East Belfast (Loop Interceptor sewer from east Belfast) - Holywood Road CSO 37	To be confirmed by NEA when water Quality impact modelling complete	UID058	East Belfast (Loop Interceptor sewer from east Belfast) - Holywood Road CSO 37	To be confirmed by NEA when water Quality impact modelling complete
KR444	Y		UID059	East Belfast (Loop Interceptor sewer from east Belfast) - Ladies Drive CSO 108	To be confirmed by NEA when water Quality impact modelling complete	UID059	East Belfast (Loop Interceptor sewer from east Belfast) - Ladies Drive CSO 108	To be confirmed by NEA when water Quality impact modelling complete
KR444	Y		UID060	East Belfast (Loop Interceptor sewer from east Belfast) - Manderson Street CSO 111	To be confirmed by NEA when water Quality impact modelling complete	UID060	East Belfast (Loop Interceptor sewer from east Belfast) - Manderson Street CSO 111	To be confirmed by NEA when water Quality impact modelling complete
KR444	Y		UID061	East Belfast (Loop Interceptor sewer from east Belfast) - Prince Regent Ave CSO 109	To be confirmed by NEA when water Quality impact modelling complete	UID061	East Belfast (Loop Interceptor sewer from east Belfast) - Prince Regent Ave CSO 109	To be confirmed by NEA when water Quality impact modelling complete
KS812	Y		UID062	Greyabbey (DAP Phase 1) - Main at CSO 01	closure	UID062	Greyabbey (DAP Phase 1) - Main at CSO 01	closure
KS812	Y		UID063	Greyabbey (DAP Phase 1) - Main at CSO 02	closure	UID063	Greyabbey (DAP Phase 1) - Main at CSO 02	closure

Project status			Unsatisfactory Interim Discharges			Justification of change of output (other than delivery date)		
Project Ref.	No change	Date change	Comment on change	New addition	Delisted	Ref.	Project Name	Drivers
KF330						UID001	Armagh (HUARMSOLN001) - Storm King CSO	closure
KF330						UID002	Armagh (HUARMSOLN001) - Scotch street CSO	closure
KF330						UID003	Armagh (HUARMSOLN001) - Courthouse 1 CSO	closure
KF330						UID005	Armagh (HUARMSOLN006) - The Mill East CSO	closure
KF330						UID006	Armagh (HU	

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 16A NON FINANCIAL MEASURES
SEWERAGE SERVICE SERVICEABILITY INDICATORS (TOTAL)**

DESCRIPTION	UNITS	DP	1	
			2012-13	CG

A	SEWERS - MAINTENANCE				
1	Total number of rising main failures	nr	0	41	B2
2	Total number of gravity sewer collapses	nr	0	1,081	B2
3	Total number of sewer blockages	nr	0	20,801	B2
4	Total number of equipment failures repaired	nr	0	10,333	B2

Table 16a – Sewerage Service Serviceability Indicators**Lines 1-3 – Sewer maintenance**

The data required for Table 16a Lines 1-3 is gathered by Networks Sewerage 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 Networks Sewerage Business Unit on a monthly basis.

This information per area is transferred to a composite Excel spreadsheet to enable a Networks Sewerage total to be calculated and the information to be presented in the format as required for the AIR13 return.

Because of nature of the collecting of the information for lines 2 and 3 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 recently added to NIW's Corporate Asset Register. Work is also progressing on identifying sewer repairs as a result of CCTV surveys. Because 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.

Confidence Grading

Because NIW are using data from checked and paid invoices the confidence grade for the AIR13 is B2. NIW expects to consolidate this CG as we move forward into AIR14; as report building continues with the single Sewer Maintenance Contractor.

Line 4 - 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.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 16b NON FINANCIAL MEASURES
SEWERAGE SERVICE SERVICEABILITY INDICATORS (NIW Only)**

DESCRIPTION	UNITS	DP
-------------	-------	----

A SEWAGE TREATMENT WORKS - BOD PERFORMANCE		UNITS	DP
1	Equivalent population band 3 to 6		
2	Excluded STWs	nr	0
3	Total STWs	nr	0

B SEWAGE TREATMENT WORKS - SS PERFORMANCE		UNITS	DP
4	Equivalent population band 3 to 6		
5	Excluded STWs	nr	0
6	Total STWs	nr	0

C SEWAGE TREATMENT WORKS - NH3 PERFORMANCE		UNITS	DP
7	Equivalent population band 3 to 6		
8	Excluded STWs	nr	0
9	Total STWs	nr	0

1		2		3		4		
NUMBER OF STW's		PERCENTAGE OF STW's WHERE THERE ARE NO BOD EVENTS FORECAST FOR THE CURRENT YEAR						CG
UNITS	DP	UNITS		DP				
nr	0	%		1				

	EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5	
173	97.7	89.7	92.3	A2
70				
243				

NUMBER OF STW's		PERCENTAGE OF STW's WHERE THERE ARE NO SS EVENTS FORECAST FOR THE CURRENT YEAR						CG
UNITS	DP	UNITS		DP				
nr		%		1				

	EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5	
173	94.2	91.1	92.8	A2
70				
243				

NUMBER OF STW's		PERCENTAGE OF STW's WHERE THERE ARE NO NH3 EVENTS FORECAST FOR THE CURRENT YEAR						CG
UNITS	DP	UNITS		DP				
nr		%		1				

	EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5	
103	92.8	88.3	95.4	A2
37				
140				

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 16b NON FINANCIAL MEASURES
SEWERAGE SERVICE SERVICEABILITY INDICATORS (PPP Only)**

DESCRIPTION	UNITS	DP
-------------	-------	----

A	SEWAGE TREATMENT WORKS - BOD PERFORMANCE		
1	Equivalent population band 3 to 6		
2	Excluded STWs	nr	0
3	Total STWs	nr	0

B	SEWAGE TREATMENT WORKS - SS PERFORMANCE		
4	Equivalent population band 3 to 6		
5	Excluded STWs	nr	0
6	Total STWs	nr	0

C	SEWAGE TREATMENT WORKS - NH3 PERFORMANCE		
7	Equivalent population band 3 to 6		
8	Excluded STWs	nr	0
9	Total STWs	nr	0

1		2		3		4	
NUMBER OF STW's		PERCENTAGE OF STWs WHERE THERE ARE NO BOD EVENTS FORECAST FOR THE CURRENT YEAR					
UNITS	DP	UNITS				DP	
nr	0	%				1	

	EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5	CG
6	74.0	74.0	72.7	A2
0				
6				

NUMBER OF STW's		PERCENTAGE OF STWs WHERE THERE ARE NO SS EVENTS FORECAST FOR THE CURRENT YEAR					
UNITS	DP	UNITS				DP	
nr		%				1	

	EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5	CG
6	68.3	68.3	68.3	A2
0				
6				

NUMBER OF STW's		PERCENTAGE OF STWs WHERE THERE ARE NO NH3 EVENTS FORECAST FOR THE CURRENT YEAR					
UNITS	DP	UNITS				DP	
nr		%				1	

	EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5	CG
6	100.0	100.0	100.0	A2
0				
6				

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 16b NON FINANCIAL MEASURES
SEWERAGE SERVICE SERVICEABILITY INDICATORS (Total)**

DESCRIPTION	UNITS	DP
-------------	-------	----

1		2		3		4		
NUMBER OF STW's		PERCENTAGE OF STW's WHERE THERE ARE NO BOD EVENTS FORECAST FOR THE CURRENT YEAR						CG
UNITS	DP	UNITS				DP		
nr	0	%				1		

A	SEWAGE TREATMENT WORKS - BOD PERFORMANCE	UNITS	DP
1	Equivalent population band 3 to 6		
2	Excluded STWs	nr	0
3	Total STWs	nr	0

	EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5	CG
179	94.0	89.2	91.7	A2
70				
249				

B	SEWAGE TREATMENT WORKS - SS PERFORMANCE	UNITS	DP
4	Equivalent population band 3 to 6		
5	Excluded STWs	nr	0
6	Total STWs	nr	0

NUMBER OF STW's		PERCENTAGE OF STW's WHERE THERE ARE NO SS EVENTS FORECAST FOR THE CURRENT YEAR						CG
UNITS	DP	UNITS				DP		
nr		%				1		

	EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5	CG
179	93.3	90.4	91.9	A2
70				
249				

C	SEWAGE TREATMENT WORKS - NH3 PERFORMANCE	UNITS	DP
7	Equivalent population band 3 to 6		
8	Excluded STWs	nr	0
9	Total STWs	nr	0

NUMBER OF STW's		PERCENTAGE OF STW's WHERE THERE ARE NO NH3 EVENTS FORECAST FOR THE CURRENT YEAR						CG
UNITS	DP	UNITS				DP		
nr		%				1		

	EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5	CG
106	92.7	88.3	95.3	A2
37				
143				

Table 16b – Sewerage Non-Financial Measures

Background – Year on Year

The Strategic Business Plan aims to undertake a significant number of schemes to upgrade a number of works with numeric standards which are currently failing. For AIR13 Northern Ireland Water (NIW) has reported on the previous 3 year results as with the delivery of the Capital Works Program, the numbers and compliance of many of the major Waste Water Treatment Works (WWTWs) has stabilised. For example, over the last several years, a significant number of the major WWTWs and numerous smaller WWTWs have been constructed to meet Environmental Needs Standards – these works serving approximately 25% of the Northern Ireland total population. A second group of WWTWs are subject to interim standards until the Capital Works Program is complete, at which time Environmental Needs Standards will apply. The works are currently passing the interim standards, so there should be no impact on results prediction.

Derivation of Data

Unlike the AIR08 return which used only 2 years data, the calculations for the AIR returns since have been based on the full 3 years data as this is now representative of future compliance and more accurately reflects the sites / schemes in place. Using only 2 years data for AIR08 meant that the final submission figures were not replicable against AIR09 onwards. As such, the AIR08 figures have not been included in the year-on-year performance graphs herein.

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 calculations were carried out in accordance with the guidance notes for Table 16b.

For 2012 the Population Equivalent (PEs) used for scheduling were the PEs agreed between NIW's Asset Management section (AMS), Environmental Regulation section and Northern Ireland Environment Agency (NIEA). These PEs were used for the scheduling of samples for 2012. In accordance with the AIR09's reporter recommendation however, the works for the AIR11 onwards submission have been assessed using the information (PEs and PE Bands) supplied by NIW's AMS for its AIR return.

This however can lead to anomalies where the sites are reported for AIR on the resident PEs, while NIW calculates its overall compliance based on the maximum PE at the site e.g. S47BI Castle Archdale has a resident population of 29 and as such is assessed by AMS as Band 1. However, as a caravan park it has a maximum PE of 809 and this figure is used by NIW for calculating population served by compliant WWTWs.

For each of the lines a number of sites held on LIMS with available results were excluded for a variety of reasons ranging from their PE being in Bands 1-2 or the site being out of service at 31st March 2013 due to the consent for that parameter having been revoked during the reporting period or the site pumped away to another WWTW. These reasons are detailed herein.

A number of sites exist in the AMS data set which are not held in the NIW LIMS, mainly as they are too small to fall into the sampling requirements or are small sea outfalls. These sites have no analytical data to determine likelihood of failure and as such have not been included in this submission. These sites are detailed separately at the end of this commentary.

Lines 1 – 3 – BOD Performance – Equivalent Population Bands 3 – 6

For the reporting period 173 NIW Sites were identified, 6 PPP sites were identified with 70 sites being excluded from the assessment.

2012 NIW Sites Excluded from BOD Assessment

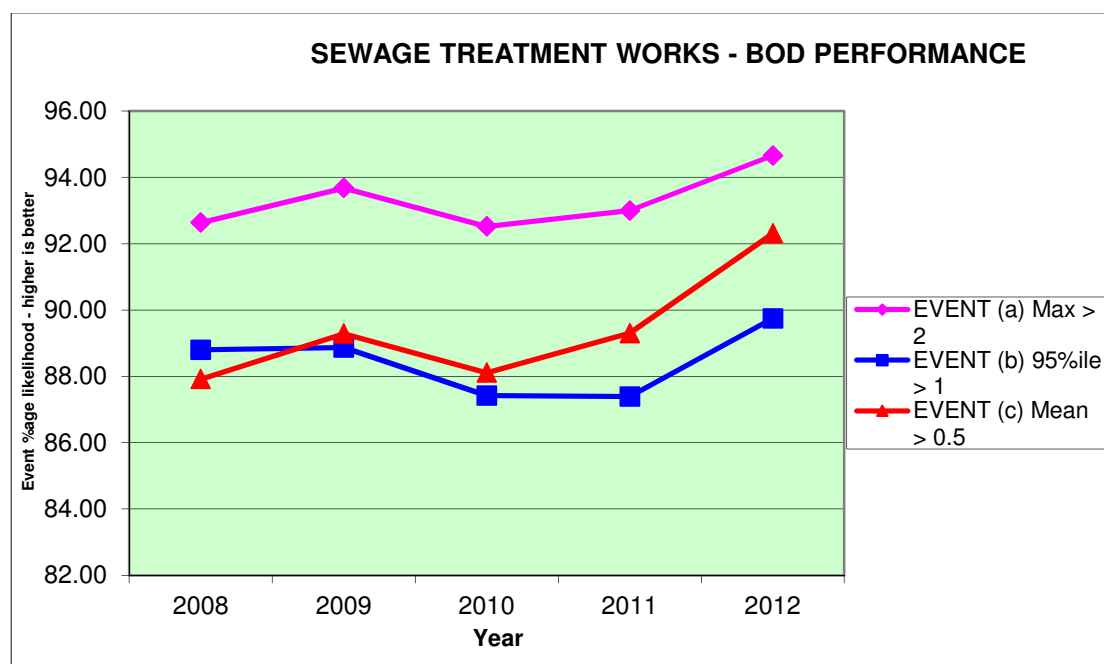
Site Code	Site Name	CARID	Reason for Exclusion
S13AJ	Clogh WWTW	S01436	Band 2
S13AU	Moorfields WWTW	S01446	Band 2
S13CN	Derrychrin WWTW	S01567	Band 2
S13CU	Dunamore WWTW	S01574	Band 2
S13DN	Orritor WWTW	S01591	Band 2
S13FM	Castledawson WWTW	S01609	Out of service @ 31/03/13
S13FT	Desertmartin WWTW	S01614	Band 2
S13GD	Knockloughrim WWTW	S01623	Band 2
S13GO	Moneyneany WWTW	S01631	Band 2
S15AR	Parkgate WWTW	S01424	Band 1
S15AT	Roughfort WWTW	S01470	Band 2
S15AW	Toome WWTW	S01427	Band 1
S17BC	Liscolman WWTW	S01191	Band 2
S17BH	Mullans WWTW	S01118	Band 2
S17CM	Clarehill WWTW	S01039	Band 2
S17EF	Ballyvoy WWTW	S01177	Band 2
S23AK	Blackskull WWTW	S02397	Band 2
S23AN	Derrytrasna WWTW	S02402	Band 2
S23AR	Maghery WWTW	S02414	Band 2
S23AW	Upper Ballinderry WWTW	S02422	Band 2
S23BK	Derrymore WWTW	S02401	Band 2
S25AL	Annaghmore WWTW	S02556	Band 2
S25AN	Annaghugh WWTW	S02602	Band 2
S25AR	Bush WWTW	S02833	Band 1
S25AY	Darkley WWTW	S02569	Band 2
S25BD	Galbally WWTW	S02844	Band 2
S25BI	Killyman WWTW	S02847	Band 1
S25BP	Redford WWTW	S02853	Band 2
S25CD	Brockagh Terrace (Mountjoy Dungannon)WWTW	S02849	Band 2
S27AR	Belleeks WWTW	S02253	Band 2
S27AW	Cullaville WWTW	S02264	Band 2
S27AY	Drumintee WWTW	S02269	Band 2
S27BE	Kilcoo WWTW	S02704	Band 2
S27BL	Lurganare WWTW	S02298	Band 2
S27BO	Moneyslane WWTW	S02151	Band 2
S27BR	Mullaghbawn WWTW	S02279	Out of service @ 31/03/13
S34MB	Mulloughbuoy	S00259	Band 2
S35AL	Ballycranbeg WWTW	S00218	Band 2

Site Code	Site Name	CARID	Reason for Exclusion
S35AM	Loughries WWTW	S00230	Band 2
S35BC	Portavogie R/T WWTW	S00209	Out of service @ 31/03/13
S36AI	Annacloy WWTW	S00292	Band 2
S36AM	Kilmore (Down)WWTW	S00285	Band 2
S36BG	Glassdrumman WWTW	S00302	Band 2
S36BH	Seaforde WWTW	S00294	Band 1
S36BI	Maghera (Down) WWTW	S00305	Band 2
S36BP	Darragh Cross WWTW	S00288	Band 1
S37AI	Gravel Hill (Hooks Corner) WWTW	S00331	Band 1
S37AP	Edenderry WWTW	S00343	Band 2
S43BA	Foreglen WWTW	S03019	Band 2
S43BF	Bonnaboigh WWTW	S03031	Band 2
S43DA	Dernaflaw WWTW	S03072	Band 2
S43DK	Tamnaherin WWTW	S03226	Band 2
S43EJ	Gortnaghey WWTW	S03126	Band 2
S43IB	Nixons Corner WWTW	S03203	Band 2
S45AE	Ardstraw WWTW	S02997	Band 2
S45EF	Garvaghey WWTW	S03116	Band 1
S45FD	Greencastle WWTW	S03132	Band 2
S45FJ	Killen WWTW	S03143	Band 2
S45IC	Plumbridge WWTW	S03210	Band 2
S45IG	Seskinore WWTW	S03217	Band 2
S45KG	Bready WWTW	S03971	Band 2
S47BA	Ballycassidy WWTW	S03012	Band 2
S47BI	Castle Archdale WWTW	S03041	Band 1
S47CA	Clabby WWTW	S03051	Band 2
S47EA	Florencecourt WWTW	S03114	Band 2
S47FE	Kinawley WWTW	S03149	Band 2
S47FH	Lack WWTW	S03154	Band 1
S47GC	Lisnarrick WWTW	S03170	Band 2
S47GI	Monea WWTW	S03186	Band 2
S47HJ	Tamlaght WWTW	S03224	Band 2

2012 PPP Sites Excluded from BOD Assessment

No PPP sites were excluded.

BOD Performance - Year on Year – Higher %age is better



Line 4 – 6– SS Performance – Equivalent Population Bands 3 – 6

For the reporting period 173 NIW Sites were identified, 6 PPP sites were identified with 70 sites being excluded from the assessment.

2012 NIW Sites Excluded from SS Assessment

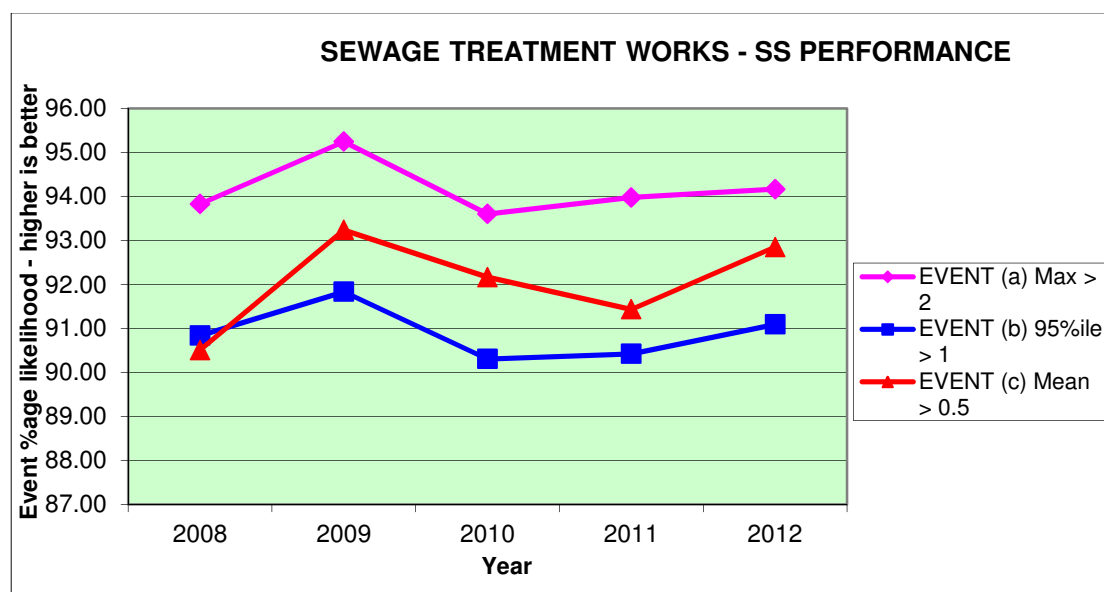
Site Code	Site Name	CARID	Reason for Exclusion
S13AJ	Clogh WWTW	S01436	Band 2
S13AU	Moorfields WWTW	S01446	Band 2
S13CN	Derrychrin WWTW	S01567	Band 2
S13CU	Dunamore WWTW	S01574	Band 2
S13DN	Orritor WWTW	S01591	Band 2
S13FM	Castledawson WWTW	S01609	Out of service @ 31/03/13
S13FT	Desertmartin WWTW	S01614	Band 2
S13GD	Knockloughrim WWTW	S01623	Band 2
S13GO	Moneyneany WWTW	S01631	Band 2
S15AR	Parkgate WWTW	S01424	Band 1
S15AT	Roughfort WWTW	S01470	Band 2
S15AW	Toome WWTW	S01427	Band 1
S17BC	Liscolman WWTW	S01191	Band 2
S17BH	Mullans WWTW	S01118	Band 2
S17CM	Clarehill WWTW	S01039	Band 2
S17EF	Ballyvoy WWTW	S01177	Band 2
S23AK	Blackskull WWTW	S02397	Band 2
S23AN	Derrytrasna WWTW	S02402	Band 2
S23AR	Maghery WWTW	S02414	Band 2
S23AW	Upper Ballinderry WWTW	S02422	Band 2
S23BK	Derrymore WWTW	S02401	Band 2

Site Code	Site Name	CARID	Reason for Exclusion
S25AL	Annaghmore WWTW	S02556	Band 2
S25AN	Annaghugh WWTW	S02602	Band 2
S25AR	Bush WWTW	S02833	Band 1
S25AY	Darkley WWTW	S02569	Band 2
S25BD	Galbally WWTW	S02844	Band 2
S25BI	Killyman WWTW	S02847	Band 1
S25BP	Redford WWTW	S02853	Band 2
S25CD	Brockagh Terrace (Mountjoy Dungannon)WWTW	S02849	Band 2
S27AR	Belleeks WWTW	S02253	Band 2
S27AW	Cullaville WWTW	S02264	Band 2
S27AY	Drumintee WWTW	S02269	Band 2
S27BE	Kilcoo WWTW	S02704	Band 2
S27BL	Lurganare WWTW	S02298	Band 2
S27BO	Moneyslane WWTW	S02151	Band 2
S27BR	Mullaghbawn WWTW	S02279	Out of service @ 31/03/13
S34MB	Mulloughbuoy	S00259	Band 2
S35AL	Ballycranbeg WWTW	S00218	Band 2
S35AM	Loughries WWTW	S00230	Band 2
S35BC	Portavogie R/T WWTW	S00209	Out of service @ 31/03/13
S36AI	Annacloy WWTW	S00292	Band 2
S36AM	Kilmore (Down)WWTW	S00285	Band 2
S36BG	Glassdrumman WWTW	S00302	Band 2
S36BH	Seaforde WWTW	S00294	Band 1
S36BI	Maghera (Down) WWTW	S00305	Band 2
S36BP	Darragh Cross WWTW	S00288	Band 1
S37AI	Gravel Hill (Hooks Corner) WWTW	S00331	Band 1
S37AP	Edenderry WWTW	S00343	Band 2
S43BA	Foreglen WWTW	S03019	Band 2
S43BF	Bonnaboigh WWTW	S03031	Band 2
S43DA	Dernaflaw WWTW	S03072	Band 2
S43DK	Tamnaherin WWTW	S03226	Band 2
S43EJ	Gortnaghey WWTW	S03126	Band 2
S43IB	Nixons Corner WWTW	S03203	Band 2
S45AE	Ardstraw WWTW	S02997	Band 2
S45EF	Garvaghey WWTW	S03116	Band 1
S45FD	Greencastle WWTW	S03132	Band 2
S45FJ	Killen WWTW	S03143	Band 2
S45IC	Plumbridge WWTW	S03210	Band 2
S45IG	Seskinore WWTW	S03217	Band 2
S45KG	Bready WWTW	S03971	Band 2
S47BA	Ballycassidy WWTW	S03012	Band 2
S47BI	Castle Archdale WWTW	S03041	Band 1
S47CA	Clabby WWTW	S03051	Band 2
S47EA	Florencecourt WWTW	S03114	Band 2
S47FE	Kinawley WWTW	S03149	Band 2
S47FH	Lack WWTW	S03154	Band 1
S47GC	Lisnarrick WWTW	S03170	Band 2
S47GI	Monea WWTW	S03186	Band 2
S47HJ	Tamlaght WWTW	S03224	Band 2

2012 PPP Sites Excluded from SS Assessment

No PPP sites were excluded.

SS Performance - Year on Year – Higher %age is better



Line 7 – 9 - Ammonia Performance – Equivalent Population Bands 3 – 6

For the reporting period 103 NIW Sites were identified, 3 PPP sites were identified with 37 sites being excluded.

2012 NIW Sites Excluded from Ammonia Assessment

Site Code	Site Name	CARID	Reason for Exclusion
S13CN	Derrychrin WWTW	S01567	Band 2
S13DN	Orritor WWTW	S01591	Band 2
S13FM	Castledawson WWTW	S01609	Out of service @ 31/03/13
S13GO	Moneyneay WWTW	S01631	Band 2
S15AT	Roughfort WWTW	S01470	Band 2
S17BC	Liscolman WWTW	S01191	Band 2
S17BH	Mullans WWTW	S01118	Band 2
S17CM	Clarehill WWTW	S01039	Band 2
S23AN	Derrytrasna WWTW	S02402	Band 2
S25AN	Annaghugh WWTW	S02602	Band 2
S25AR	Bush WWTW	S02833	Band 1
S25AY	Darkley WWTW	S02569	Band 2
S25BD	Galbally WWTW	S02844	Band 2
S25CD	Brockagh Terrace (Mountjoy Dungannon)WWTW	S02849	Band 2
S27AR	Belleeks WWTW	S02253	Band 2
S27AY	Drumintee WWTW	S02269	Band 2
S27BE	Kilcoo WWTW	S02704	Band 2
S27BL	Lurganare WWTW	S02298	Band 2
S35AL	Ballycranbeg WWTW	S00218	Band 2
S35AM	Loughries WWTW	S00230	Band 2
S36AI	Annacloy WWTW	S00292	Band 2

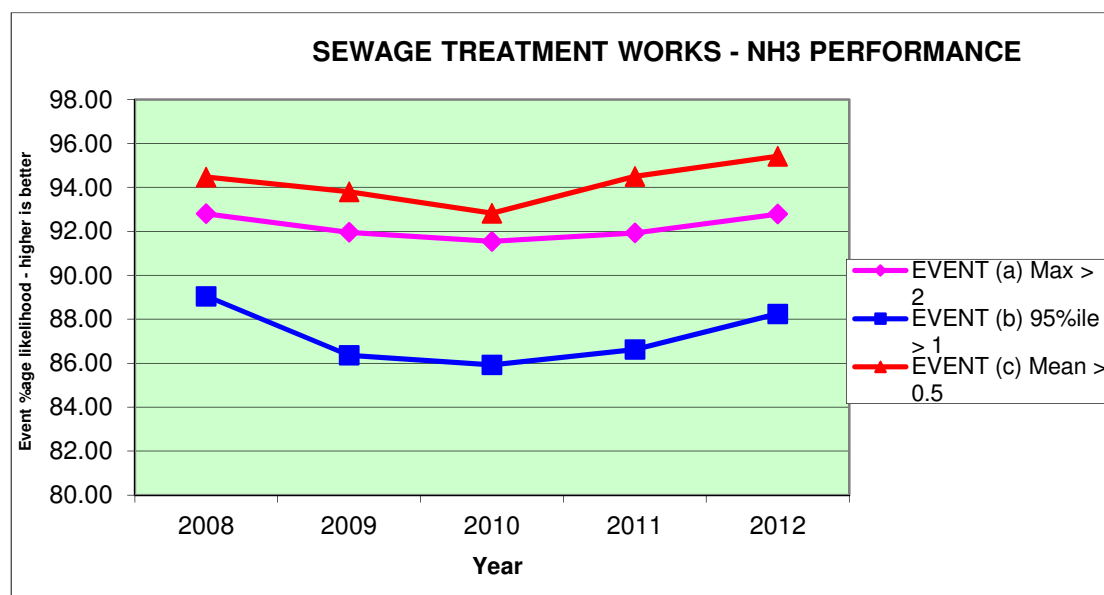
Site Code	Site Name	CARID	Reason for Exclusion
S36AM	Kilmore (Down)WWTW	S00285	Band 2
S36BI	Maghera (Down) WWTW	S00305	Band 2
S37AI	Gravel Hill (Hooks Corner) WWTW	S00331	Band 1
S43DK	Tamnaherin WWTW	S03226	Band 2
S43EJ	Gortnaghey WWTW	S03126	Band 2
S43IB	Nixons Corner WWTW	S03203	Band 2
S45EF	Garvaghey WWTW	S03116	Band 1
S45FD	Greencastle WWTW	S03132	Band 2
S45FJ	Killen WWTW	S03143	Band 2
S45KG	Bready WWTW	S03971	Band 2
S47CA	Clabby WWTW	S03051	Band 2
S47FE	Kinawley WWTW	S03149	Band 2
S47FH	Lack WWTW	S03154	Band 1
S47GC	Lisnarrick WWTW	S03170	Band 2
S47GI	Monea WWTW	S03186	Band 2
S47HJ	Tamlaght WWTW	S03224	Band 2

2012 PPP Sites Excluded from Ammonia Assessment

No PPP sites were excluded.

Year on Year

NH3 Performance - Year on Year – Higher %age is better



AIR12 Active AMS Sites not on NIW's LIMS and not reported on

CAR ID	WWTWs Name	AIR13 Band	AIR13 Reported PE
S00003	Forked Bridge WTW (Septic Tank)	Band 1	3
S00011	Woodburn/Dorisland WTW (Septic Tank)	Band 1	3
S00115	Drumaroad (WTW)	Band 1	3
S00174	Silent Valley (Septic Tank 1)	Band 1	3
S00174	Silent Valley (Septic Tank 2)	Band 1	3
S00174	Silent Valley (Septic Tank 3)	Band 1	3
S00174	Silent Valley (Septic Tank 4)	Band 1	3
S00174	Silent Valley (Septic Tank 5)	Band 1	3
S00207	Tubber Road (10-16)	Band 1	12

CAR ID	WWTWs Name	AIR13 Band	AIR13 Reported PE
S00210	Inishargy Road(10-12)	Band 1	6
S00211	Inishargy Road(36-48)	Band 1	29
S00212	Inishargy Road(2-8)	Band 1	12
S00213	Whitechurch Road (45-53)	Band 1	15
S00219	Blackstaff (Septic Tank)	Band 1	30
S00220	Ballyfrench Road(1-3)	Band 1	6
S00221	Ballyeastborough Road (15-17)	Band 1	6
S00222	Quarter Road	Band 1	9
S00223	Main Road Cloughy (103-111)	Band 1	15
S00225	Kearney(Retention Tank)	Band 1	66
S00227	Craigaroddan Road(6-8)	Band 1	6
S00228	Ballygarvigan	Band 1	42
S00229	Bar Hall	Band 1	27
S00231	Portaferry Road(96-100)	Band 1	9
S00232	Movilla Road(136-140)	Band 1	9
S00234	Woburn Road (63-69)	Band 1	12
S00235	Windmill Road(24-32)	Band 1	15
S00238	Ballydrain Road (39-43)	Band 1	12
S00240	Ringneill Road(1-5)	Band 1	9
S00242	Ravara Road (9-19)	Band 1	18
S00243	Ballygowan Road(41-47)	Band 1	12
S00244	Moss Road(76-78)	Band 1	6
S00245	Lisbarnet Road (47-53)	Band 1	12
S00246	Drumhirk	Band 1	24
S00248	Drumreagh Road(9-11)	Band 1	6
S00249	Clattering Ford Road (12-16)	Band 1	9
S00250	Kilcarn Road(7-9)	Band 1	6
S00251	Ballygowan Road(102-104)	Band 1	6
S00254	Craigaruskey Road (66-68)	Band 1	6
S00255	Kilmood	Band 1	169
S00256	Ballymiscaw road (37-41)	Band 1	9
S00258	Tullyhubbert Road(75-81)	Band 1	12
S00260	Ballylumford Cottages	Band 1	61
S00274	Coneyisland (WWTW)	Band 1	99
S00276	Ballytrim	Band 1	33
S00280	Donard View	Band 1	37
S00281	Lessans	Band 1	18
S00283	Carricknaveagh (WWTW)	Band 1	17
S00284	Thorney Glen	Band 1	50
S00287	Lisowan	Band 1	50
S00289	The Demesne	Band 1	6
S00291	Bells Hill	Band 1	17
S00306	Blackrock Retention Tank (Down)	Band 1	249
S00308	Craignasasonagh	Band 1	17
S00314	Carrigenagh (WWTW)	Band 1	12
S00324	Glenavy Road (Antrim)	Band 1	6
S00332	Bresagh	Band 1	30
S00333	Ballycreelly Road (38-40)	Band 1	12
S00336	Ballycairn (Down)	Band 1	37
S00338	Moneyreagh Road (51-55)	Band 1	9
S00340	Old Holywood Road(190-196)	Band 1	12
S00776	Ballybarnes Road (80-82)	Band 1	3
S00829	Gransha Road(26-28)	Band 1	3

CAR ID	WWTWs Name	AIR13 Band	AIR13 Reported PE
S00830	New Road(37-39)	Band 1	6
S00831	Parsonage Road(110-120)	Band 1	18
S00832	Carrowdore Road(38-40)	Band 1	6
S00833	Ballycrochan Road	Band 1	6
S00834	Ballykeel Cottages(1-4)	Band 1	13
S00835	Glen Cottages (1-6)	Band 1	17
S00836	Craigdarragh Road(85-87)	Band 1	8
S00837	Killaughey Road(252-254)	Band 1	6
S00839	Lisbane Road(38-40)	Band 1	6
S00840	Ballygalget Road(1)	Band 1	6
S00841	Newcastle Road(18-20)	Band 1	6
S00845	Upper Ballygelagh Road(12-18)	Band 1	12
S00847	Ballyrainey Road (65-67)	Band 1	6
S00848	Comber Road(102-106)	Band 1	9
S00849	Ballyalton Rd (20-22)	Band 1	6
S00850	Murdocks Lane(1-6)	Band 1	17
S00852	Moneyreagh Road(139-141)	Band 1	6
S00853	Moss Road(36-38)	Band 1	3
S00854	Station Road(155-157)	Band 1	6
S00857	Middle Braniel Road(80-90)	Band 1	18
S00931	Ballinrees WTW(Septic Tank)	Band 1	6
S01089	Ballymacormick	Band 1	18
S01090	Ballyveely	Band 1	6
S01093	Benvardin Road	Band 1	6
S01094	Burnquarter	Band 1	42
S01098	Coolkeeran	Band 1	9
S01100	Dempsey Park	Band 1	69
S01103	Donnelly Park	Band 1	36
S01104	Drones	Band 1	48
S01106	Drumreagh	Band 1	6
S01107	Dungorbery	Band 1	6
S01110	Gortereghy	Band 1	17
S01111	Hillcrest (Antrim)	Band 1	24
S01112	Killoogue	Band 1	18
S01114	Knockans (WWTW)	Band 1	6
S01119	Navery Road	Band 1	12
S01121	Rornashane	Band 1	42
S01124	Craigmore Road(18-20)	Band 1	6
S01125	Shinny Road(20-22)	Band 1	6
S01126	Ballyrashane Road(37-39)	Band 1	6
S01127	Boghill Road(52-54)	Band 1	6
S01128	Newmills Road(70-72)	Band 1	6
S01131	Ballinteer	Band 1	24
S01132	Ballyagan	Band 1	24
S01133	Ballyhacket	Band 1	18
S01134	Ballyhome (WWTW)	Band 1	77
S01135	Ballylintagh (New)	Band 1	59
S01136	Ballyrock	Band 1	47
S01138	Boghill (WWTW)	Band 1	12
S01139	Boveedy	Band 1	75
S01141	Caheney	Band 1	12
S01143	Coole Glebe	Band 1	24
S01144	Craigavole (WWTW)	Band 1	21

CAR ID	WWTWs Name	AIR13 Band	AIR13 Reported PE
S01145	Culbane (WWTW)	Band 1	21
S01147	Cullyramer	Band 1	6
S01149	Drumagarner	Band 1	18
S01150	Drumane	Band 1	18
S01151	Drumcroon (WWTW)	Band 1	6
S01155	Greenhill (WWTW)	Band 1	12
S01157	Lisnagalt	Band 1	6
S01158	Lisnamuck (Coleraine)	Band 1	24
S01159	Lisnisk	Band 1	15
S01160	Longs Glebe	Band 1	78
S01162	Managher	Band 1	15
S01164	Mayoghill (WWTW)	Band 1	6
S01165	McCleary	Band 1	6
S01166	Moneycarrie (WWTW)	Band 1	15
S01167	Moneydig	Band 1	61
S01169	Priestland	Band 1	85
S01170	Ringsend	Band 1	76
S01173	Ballynagard (Antrim)	Band 1	9
S01175	Ballycleagh	Band 1	6
S01176	Coolnagoppoge (WWTW)	Band 1	37
S01179	Capecastle	Band 1	47
S01180	Carnduff (Retention Tank)	Band 1	79
S01181	Castlenagree	Band 1	33
S01182	Churchfield Road	Band 1	21
S01184	Deffrick	Band 1	71
S01185	Dunserverick (Retention Tank)	Band 1	89
S01187	Glasmullen (WWTW)	Band 1	9
S01188	Glenmakeeran	Band 1	6
S01189	Greenans	Band 1	9
S01190	Knocknatavanna	Band 1	22
S01192	Lisnagunogue	Band 1	95
S01193	Maghernarhar	Band 1	12
S01195	Toberkeagh	Band 1	27
S01196	Torr Head	Band 1	6
S01197	Tromra	Band 1	33
S01198	Tureagh	Band 1	27
S01199	Turraloskin	Band 1	23
S01207	Oaklands (Broughshane)	Band 1	3
S01317	Killylane WTW(Septic Tank)	Band 1	3
S01322	Cargin Road	Band 1	30
S01417	Ballyutoag	Band 1	6
S01420	Farranflugh	Band 1	6
S01421	Lisnevanagh	Band 1	31
S01426	Staffordstown Road	Band 1	6
S01430	Ballymarlagh	Band 1	39
S01431	Ballynafie	Band 1	70
S01432	Buckna (WWTW)	Band 1	40
S01434	Carnbeg	Band 1	15
S01435	Carnlough Road	Band 1	9
S01438	Crankill	Band 1	9
S01439	Crosskeys Road	Band 1	9
S01443	Grove Park	Band 1	27
S01444	Killygore	Band 1	50

CAR ID	WWTWs Name	AIR13 Band	AIR13 Reported PE
S01448	Old Green	Band 1	17
S01450	Procklis	Band 1	92
S01451	Racavan	Band 1	37
S01452	Skerry View	Band 1	33
S01455	Straid (Ballymena)	Band 1	53
S01457	Tullygrawley	Band 1	33
S01459	Carnalbanagh	Band 1	60
S01464	Magheramourne (WWTW)	Band 1	85
S01466	Munie (WWTW)	Band 1	33
S01468	Ballycorr Grove	Band 1	28
S01472	Dungonnell WTW (Septic Tank)	Band 1	3
S01557	Ballygruby	Band 1	17
S01560	Clare	Band 1	47
S01563	Corchoney Lane (2-4)	Band 1	6
S01565	Corvanaghan (WWTW)	Band 1	18
S01566	Curglasson	Band 1	62
S01568	Donaghey (1)	Band 1	6
S01569	Donaghey (2)	Band 1	51
S01570	Doorless	Band 1	12
S01571	Drapersfield (WWTW)	Band 1	96
S01572	Drumshambo	Band 1	12
S01575	Gortaclady (WWTW)	Band 1	17
S01576	Gortatray	Band 1	12
S01577	Gortnacross	Band 1	15
S01578	Keenaghan (1)	Band 1	12
S01579	Keenaghan (2)	Band 1	12
S01580	Kildress Terrace	Band 1	18
S01584	Kinturk	Band 1	18
S01585	Knockanroe	Band 1	12
S01592	Orritor Craigs	Band 1	6
S01596	Sherrigrim	Band 1	18
S01597	Skernahergney	Band 1	12
S01598	Edendoit Road(107-109)	Band 1	6
S01600	Tullyreavy	Band 1	18
S01604	Ballynease	Band 1	18
S01605	Beagh	Band 1	36
S01607	Broagh	Band 1	33
S01608	Carmean	Band 1	51
S01616	Drumard (Antrim)	Band 1	15
S01617	Fallahogy	Band 1	27
S01622	Kilross	Band 1	74
S01624	Lislea Terrace	Band 1	18
S01625	Lismoyle	Band 1	24
S01626	Lisnamuck (Magherafelt)	Band 1	49
S01627	Longfield (Moorside Villas)	Band 1	93
S01628	Luney	Band 1	17
S01630	Milltown (Maghera)	Band 1	20
S01632	Noones Vale	Band 1	53
S01634	Ritchies Villas	Band 1	12
S01635	Rocktown	Band 1	17
S01710	Manse Road (Antrim)	Band 1	6
S01713	Springhill Road(1)	Band 1	14
S01715	Garryduff Road(112- 122)	Band 1	18

CAR ID	WWTWs Name	AIR13 Band	AIR13 Reported PE
S01718	Annaghquinn Road(49)	Band 1	6
S01719	Straid Road(111)	Band 1	6
S01720	Gortin Road(12)	Band 1	6
S01721	Straid Road(12)	Band 1	6
S01723	Causeway Road(122)	Band 1	6
S01724	Glenshesk Road(127)	Band 1	3
S01725	Craigmore Road(139 - 145)	Band 1	12
S01726	Causeway Road(15)	Band 1	6
S01727	Pharis Road(15)	Band 1	12
S01728	Movenis Road(17)	Band 1	6
S01729	Moyarget Road(178)	Band 1	6
S01730	Causeway Road(180)	Band 1	6
S01731	Ballyrashane Road(21)	Band 1	6
S01732	Whitepark Road(211)	Band 1	6
S01733	Glenleary Road(22)	Band 1	3
S01734	Ballyvelton Road(23)	Band 1	15
S01736	Causeway Road(30)	Band 1	6
S01737	Glenbush Road(31)	Band 1	6
S01738	Lisnagat Road(34)	Band 1	6
S01739	Mullan Road(35)	Band 1	6
S01740	Culramoney Road(5)	Band 1	6
S01741	Whitepark Road(56)	Band 1	12
S01742	Bregagh Road(56-58)	Band 1	6
S01743	Bregagh Road(60-62)	Band 1	6
S01744	Bregagh Road(68-70)	Band 1	6
S01745	Lisnagat Road(64)	Band 1	6
S01746	Whitepark Road(71)	Band 1	6
S01747	Dunboe Road(75-77)	Band 1	6
S01748	Ballinlea Road(81)	Band 1	9
S01749	Drumavoley Road(83)	Band 1	6
S01750	Gorran Road(84)	Band 1	6
S01751	Kinneyglass Road(87-89)	Band 1	6
S01753	Magheramore Road(89)	Band 1	9
S01754	Moneybrannon Road(89)	Band 1	6
S01755	Agivey Road(199-201)	Band 1	6
S01757	Moneynick Road(118)	Band 1	12
S01760	Ballybentragh(66-72)	Band 1	6
S01761	Moneynick Road(94)	Band 1	12
S01763	Ballydonaghy Cottages (1-4)	Band 1	12
S01764	Ballynamullan Road(32-34)	Band 1	6
S01765	Ballynashee Road(71-77)	Band 1	12
S01766	Cherryvalley Road(24)	Band 1	9
S01767	Cogry Road(25-27)	Band 1	6
S01768	Connaught Road(21)	Band 1	15
S01769	Coolsythe Road(23)	Band 1	6
S01770	Creggan Road(27)	Band 1	6
S01771	Deerpark Road(92)	Band 1	18
S01772	Diamond cottages(1)	Band 1	30
S01773	Drennans Road(6)	Band 1	6
S01774	Hollybank Road(10)	Band 1	6
S01775	Hollybank Road(54)	Band 1	15
S01776	Largy Cottages(1)	Band 1	30
S01777	Gortnagallon Cottages(1-4)	Band 1	12

CAR ID	WWTWs Name	AIR13 Band	AIR13 Reported PE
S01779	Oldstone Terrace(8)	Band 1	24
S01780	Rickamore Road(36-38)	Band 1	6
S01781	Seven Mile Straight(177)	Band 1	12
S01782	Shaneoguestown Road(38)	Band 1	6
S01783	Cushleake Road(37-39)	Band 1	6
S01785	Railway view(3)	Band 1	6
S01787	Glenstaghey Road(11)	Band 1	10
S01791	Backlower Road(111-115)	Band 1	9
S01792	Ballydermot Road(7-9)	Band 1	6
S01793	Ballynease Road(160-164)	Band 1	9
S01794	Bellshill Road(83-85)	Band 1	6
S01795	Bells hill(63-65)	Band 1	6
S01796	Carmean Road(42-46)	Band 1	9
S01797	Shore Road (Castle View)	Band 1	12
S01798	Culnady Road(46-50)	Band 1	9
S01799	Moyagall Road(115-117)	Band 1	6
S01800	Drumbolg Road(98-100)	Band 1	6
S01801	Drumconvis Road(16-18)	Band 1	6
S01802	Battery Road(43-45)	Band 1	6
S01803	Drumnacannon Road(20-22)	Band 1	6
S01804	Dunronan Road(25-27)	Band 1	6
S01805	Edendoit Road(22-32)	Band 1	18
S01806	Ford Road(27)	Band 1	6
S01807	Gortnaskea Road(45-47)	Band 1	6
S01808	Hillhead Road(127-131)	Band 1	9
S01809	Killyneese Road(14-16)	Band 1	6
S01810	Lisnamorrow	Band 1	15
S01811	Lower Grange Road(20-26)	Band 1	12
S01812	Mullaghboy Road(136-138)	Band 1	6
S01813	Point Road(29-33)	Band 1	15
S01814	Pomeroy Road(47-49)	Band 1	6
S01815	Stranagard	Band 1	6
S01816	Tamnadeese Road(7-9)	Band 1	6
S01817	Tobermore Road(144-146)	Band 1	6
S01818	Tullaghmore Road(41-43)	Band 1	6
S01819	Tullyveagh Road(2-4)	Band 1	6
S01820	Tulnacross Road(44-46)	Band 1	6
S02016	Annaghmore Road(28)	Band 1	18
S02017	Orritor Road(182)	Band 1	12
S02018	Seven Mile Straight(78)	Band 1	6
S02019	Seven Mile Straight(82)	Band 1	6
S02020	Seven Mile Straight(86)	Band 1	6
S02021	Corbally Road(45)	Band 1	6
S02022	Drumavoley Road(39-41)	Band 1	6
S02023	Chatham Road	Band 1	6
S02024	Garryduff Church	Band 1	9
S02026	Drumagarner Road(148-150)	Band 1	6
S02027	Drumagarner Road(212-218)	Band 1	12
S02028	Dreenan Road(38-40)	Band 1	6
S02029	Riverside(16-20)	Band 1	12
S02030	Davagh Park	Band 1	18
S02031	Ballymaguire Road(33-35)	Band 1	6
S02032	Corkill (Tyrone)	Band 1	6

CAR ID	WWTWs Name	AIR13 Band	AIR13 Reported PE
S02033	Coagh Road(20-22)	Band 1	6
S02034	Drumenny Road(120-128)	Band 1	9
S02049	Breaside Cottages(1-6)	Band 1	18
S02057	Dunore WTW (Septic Tank No1)	Band 1	3
S02057	Dunore WTW (Septic Tank No2)	Band 1	3
S02057	Dunore WTW (Septic Tank No3)	Band 1	3
S02059	Boleran Road (Garvagh)	Band 1	12
S02110	Katesbridge Road(79-85)	Band 1	12
S02113	Castlevennon Road(49-51)	Band 1	6
S02114	Aughnavallog	Band 1	36
S02115	Ballybrick	Band 1	18
S02117	Ballymore	Band 1	15
S02118	Ballyroney Road (WWTW)	Band 1	18
S02119	Ballyvarley (WWTW)	Band 1	18
S02121	Castlevennon	Band 1	3
S02122	Balleevy	Band 1	12
S02124	Diamond Road(73-79)	Band 1	12
S02125	Dree Hill	Band 1	12
S02126	Dromara Road (Lacken)	Band 1	12
S02128	Dronehill Road	Band 1	12
S02129	Drumaran Road	Band 1	9
S02131	Drumgooland	Band 1	6
S02132	Edentiroory	Band 1	9
S02133	Glenhead Road	Band 1	12
S02134	Hazelbank	Band 1	24
S02135	Hillhead Road (Down)	Band 1	6
S02137	Killysavan	Band 1	30
S02140	Laurelvale Road	Band 1	12
S02147	Maglion Terrace	Band 1	36
S02148	Manse Road (Down)	Band 1	12
S02150	McCandless Terrace	Band 1	36
S02153	Mossvale Terrace	Band 1	36
S02154	Mount Ida	Band 1	6
S02158	Ringsend Road	Band 1	6
S02163	The Skeagh	Band 1	9
S02164	Dougan place	Band 1	36
S02165	Sentry Box Road (20-22)	Band 1	6
S02167	Whitegate Road	Band 1	9
S02169	Ballykelly (DOWN)	Band 1	21
S02171	Greenan	Band 1	12
S02172	Rock Cottages	Band 1	21
S02175	Portadown Road (Tandragee)	Band 1	12
S02176	Rosevale Road	Band 1	12
S02243	Ballintemple WTW (Septic Tank)	Band 1	3
S02249	Armagh Road(144-146)	Band 1	6
S02250	Armagh Road(202-206)	Band 1	9
S02251	Armagh Road(189-193)	Band 1	9
S02252	Ballymoyer	Band 1	42
S02254	Carrig Place	Band 1	18
S02255	Carnally	Band 1	9
S02256	Carran Hill (WWTW)	Band 1	3
S02258	Ballsmill	Band 1	12
S02259	Glenanne	Band 1	9

CAR ID	WWTWs Name	AIR13 Band	AIR13 Reported PE
S02260	Concession Road	Band 1	21
S02261	Corrinure	Band 1	6
S02262	Aughanduff	Band 1	12
S02263	Oneill Terrace	Band 1	33
S02267	Dorsy	Band 1	59
S02268	Drumilly	Band 1	60
S02274	Lisnalea	Band 1	75
S02276	McKinley Park	Band 1	45
S02278	Mountain View (Drumintee)	Band 1	113
S02283	Orahilly Park	Band 1	37
S02284	Oliver Plunkett Park	Band 1	84
S02286	St Bridgids Villas	Band 1	27
S02292	Magee Terrace	Band 1	15
S02294	Killeen (Armagh)	Band 1	97
S02297	Jerrettspass (WWTW)	Band 1	39
S02299	Demoan Villas	Band 1	18
S02369	Ballymaconaghy WTW (Septic Tank)	Band 1	3
S02380	Castor Bay	Band 1	24
S02389	Liscorran Road(3-5)	Band 1	6
S02391	Anville Crescent	Band 1	42
S02392	Corbrackey Road	Band 1	12
S02399	Charlestown	Band 1	76
S02404	Drumard Primate (WWTW)	Band 1	37
S02408	Jennys Lane	Band 1	17
S02409	Knocknagore (WWTW)	Band 1	15
S02418	Mullahead Road (WWTW)	Band 1	9
S02421	Tartaraghan	Band 1	50
S02428	Clarehill Road	Band 1	12
S02430	Legatirriff	Band 1	23
S02432	Knocknarea Road	Band 1	15
S02433	Gallrock	Band 1	17
S02530	Seagahan	Band 1	24
S02531	Clay Lake	Band 1	3
S02547	Aghory	Band 1	65
S02557	Ardress (WWTW)	Band 1	123
S02560	Ballymacawley	Band 1	22
S02561	Ballymacnab	Band 1	30
S02562	Ballynagalliagh (Armagh)	Band 1	27
S02565	Cavanagrow	Band 1	38
S02568	Crossnamoyle	Band 1	18
S02571	Derryhaw	Band 1	10
S02572	Derrymagowan	Band 1	6
S02573	Doogary	Band 1	17
S02574	Drumhillery	Band 1	71
S02576	Dundrum (Armagh)	Band 1	23
S02578	Eglish (Armagh)	Band 1	87
S02580	Grangemore	Band 1	42
S02581	Grange Blundel	Band 1	18
S02583	Kilmachugh	Band 1	27
S02585	Lisdown	Band 1	22
S02586	Lisnadill (WWTW)	Band 1	22
S02588	Kiltubbrid (WWTW)	Band 1	33
S02589	Magheraville	Band 1	12

CAR ID	WWTWs Name	AIR13 Band	AIR13 Reported PE
S02590	Manor House	Band 1	12
S02598	Teeraw	Band 1	12
S02599	Tullyelmer (WWTW)	Band 1	6
S02600	Tullyroan	Band 1	61
S02605	Derrynoose	Band 1	18
S02670	Lough Island Reavy WTW (Septic Tank)	Band 1	3
S02677	Fofanny WTW(Septic Tank)	Band 1	3
S02678	Foffanybane WTW (Septic Tank)	Band 1	3
S02682	Carneyhough	Band 1	6
S02686	Burren Road	Band 1	12
S02690	Ballymaconaghy Road	Band 1	6
S02691	Ballyrussell	Band 1	24
S02692	Bankside Shinn	Band 1	71
S02696	Corcreechy Road	Band 1	9
S02697	Drumgrevagh	Band 1	6
S02698	Drumnascamph	Band 1	38
S02699	Fourmile	Band 1	18
S02700	Glen View (Down)	Band 1	12
S02702	Hilltown Road	Band 1	15
S02707	Lurgancahone Road(35-39)	Band 1	9
S02708	Lurgancahone Road(57-59)	Band 1	6
S02710	Moneyscalp	Band 1	21
S02712	Mountain View (Tullymurry)	Band 1	36
S02716	Shinn Road	Band 1	18
S02717	St Johns Terrace (Kilcoo)	Band 1	30
S02718	St Marys Terrace	Band 1	18
S02719	St Patricks Villas	Band 1	27
S02724	Corgary Cottages (New)	Band 1	18
S02725	Kilbroney Park(1-4)	Band 1	12
S02726	Newry Road Rathfriland (80-83)	Band 1	6
S02727	Ballyardel	Band 1	12
S02728	Ballymaderphy	Band 1	66
S02778	Altmore WTW (Septic Tank)	Band 1	3
S02793	Bovean	Band 1	30
S02832	Brantry	Band 1	26
S02837	Derrygortrevy	Band 1	24
S02839	Doan Place	Band 1	18
S02845	Inishmagh	Band 1	15
S02851	Mullyroddan	Band 1	21
S02854	Stangmore (WWTW)	Band 1	18
S02855	Tullyleek	Band 1	24
S02856	Kinego Cottages	Band 1	12
S02858	Edencrannon (WWTW)	Band 1	90
S02860	Drumard (Tyrone)	Band 1	12
S02861	Kilnacart	Band 1	12
S02887	Glascar Road(28-30)	Band 1	6
S02889	Gortnagola Road	Band 1	6
S02890	Ballygowan Road (140-142)Banbridge	Band 1	6
S02893	Upper Cranlome Road	Band 1	6
S02897	Commons School Road(8-10)	Band 1	6
S02903	Crilly	Band 1	9
S02993	Altishane	Band 1	12
S02995	Ardess	Band 1	66

CAR ID	WWTWs Name	AIR13 Band	AIR13 Reported PE
S03009	Ballee Road	Band 1	15
S03011	Ballynamullan	Band 1	12
S03014	Ballygowans	Band 1	12
S03017	Ballymacallion (WWTW)	Band 1	18
S03021	Ballyquinn (WWTW)	Band 1	101
S03025	Beltrim (WWTW)	Band 1	15
S03028	Blaney	Band 1	18
S03029	Bohulkin	Band 1	9
S03030	Bolea (WWTW)	Band 1	93
S03036	Carnalea Road	Band 1	15
S03037	Carnanbane	Band 1	42
S03040	Carrontreemall	Band 1	39
S03043	Castlemellan Lower	Band 1	18
S03044	Castlemellan Upper	Band 1	18
S03046	Castletown (WWTW)	Band 1	15
S03047	Caugh Hill (WWTW)	Band 1	9
S03050	Church Hill	Band 1	69
S03058	Coragh	Band 1	18
S03059	Corkill (Fermanagh)	Band 1	18
S03060	Cornakessagh	Band 1	9
S03061	Cornamuck	Band 1	27
S03062	Corickmore	Band 1	18
S03063	Corry (WWTW)	Band 1	12
S03066	Creaghcor	Band 1	30
S03067	Crebarkey	Band 1	24
S03068	Creevangar	Band 1	12
S03069	Crew Bridge	Band 1	18
S03073	Derryaghna	Band 1	18
S03085	Dromore Highlands	Band 1	116
S03088	Drumenny	Band 1	98
S03090	Drumgay (1)	Band 1	11
S03091	Drumgay (2)	Band 1	39
S03093	Drumlegagh Road South	Band 1	12
S03094	Drummack	Band 1	16
S03095	Drummond	Band 1	22
S03096	Drumnakilly	Band 1	122
S03097	Drumneechy	Band 1	24
S03102	Dunmullan	Band 1	58
S03104	Edenderry (Tyrone)	Band 1	58
S03105	Edenmore Road	Band 1	12
S03107	Ervey Road	Band 1	15
S03109	Faughan	Band 1	9
S03111	Fincarn	Band 1	85
S03117	Garvetagh	Band 1	66
S03119	Glenabbey (WWTW)	Band 1	45
S03120	Glenagoorland	Band 1	18
S03127	Gortscreagan	Band 1	68
S03130	Gransha Park(25-27)	Band 1	6
S03131	Stradreagh (Septic Tank)	Band 1	12
S03133	Greenville	Band 1	24
S03136	Hunter Bungalows	Band 1	18
S03138	Keady (Fermanagh)	Band 1	18
S03139	Keenaghan (Tyrone)	Band 1	18

CAR ID	WWTWs Name	AIR13 Band	AIR13 Reported PE
S03141	Kilgarrett	Band 1	12
S03142	Killaloo	Band 1	92
S03148	Kilskeery	Band 1	60
S03151	Knockbrack	Band 1	22
S03152	Knockmoyle	Band 1	95
S03153	Knockonny	Band 1	18
S03156	Legacurry (Tyrone)	Band 1	19
S03157	Legaghory	Band 1	30
S03158	Letterbin (WWTW)	Band 1	59
S03161	Letterkeen	Band 1	12
S03163	Limestone (2)	Band 1	6
S03166	Lisdoart (1)	Band 1	58
S03167	Lisdoart (2)	Band 1	16
S03168	Lisnakilly	Band 1	33
S03169	Lisnaragh	Band 1	24
S03175	Loughan Road (Tyrone)	Band 1	27
S03176	Magheracoltan	Band 1	21
S03183	Milltown(Artigarvan)	Band 1	12
S03185	Molan	Band 1	36
S03188	Moneycanon	Band 1	37
S03189	Monmurry	Band 1	24
S03190	Moorfield	Band 1	18
S03191	Mountcastle	Band 1	12
S03194	Mulderg (WWTW)	Band 1	55
S03196	Mullans (Fermanagh)	Band 1	6
S03197	Mullynaburtlan	Band 1	18
S03201	Eskragh	Band 1	33
S03206	Owenbeg (WWTW)	Band 1	30
S03211	Rosscolban	Band 1	3
S03212	Rosscor	Band 1	15
S03214	Rousky	Band 1	33
S03216	Scribbagh (WWTW)	Band 1	14
S03222	Springfield	Band 1	61
S03227	Tattysallagh	Band 1	70
S03230	Tirquin	Band 1	24
S03233	Tullyard(Tyrone)	Band 1	12
S03234	Tummery	Band 1	24
S03235	Tursallagh	Band 1	18
S03239	Woaghternerry	Band 1	30
S03277	Donnybrewer Road(99)	Band 1	6
S03278	Donnybrewer Road(98)	Band 1	6
S03334	Culmore Point	Band 1	18
S03494	Belleek (WTW) Septic Tank	Band 1	3
S03499	Derg (WTW) Septic Tank	Band 1	3
S03504	Glenhordial WTW (Septic Tank)	Band 1	3
S03505	Killea WTW(Septic Tank)	Band 1	3
S03507	Lough Bradan WTW (Septic Tank)	Band 1	3
S03509	Lough Macrory WTW (Septic Tank)	Band 1	3
S03911	Derryanvil	Band 1	12
S03947	Abbacy Road	Band 1	42
S03975	Tully Road Headworks	Band 4	3198
S03981	Kinallen (WWTW)	Band 3	1168
S03987	Drumlegagh Church Road	Band 1	92

CAR ID	WWTWs Name	AIR13 Band	AIR13 Reported PE
S04026	Upper Malone Road	Band 1	24
S04027	3 Sisters	Band 1	18
S04037	Ballyvelton Road(45-51)	Band 1	12
S04084	Ferris Bay (50)	Band 1	15
S04086	Horse Park (5-7)	Band 1	6
S04087	Lough Fea (WwTW)	Band 1	3
S04088	Glaskerbeg Road (11)	Band 1	3
S04090	Ballyhornan Outfall	Band 3	913
S04091	Ballee Road (75-83)	Band 1	9
S04092	Leeke Road	Band 1	32
S04093	Carricklongfield Road (21-23)	Band 1	6
S04094	Edenreagh Road(39-41)	Band 1	15
S04095	Ardlough Road (40-42)	Band 1	6
S04096	Priestland Road (51-53)	Band 1	6
S04097	Foreglen Road (51-53)	Band 1	6
S04098	Drumlegagh Church Road (63-65)	Band 1	6
S04099	Bonds Glen Road (65-67)	Band 1	6
S04100	Carrowreagh Road(68-70)	Band 1	6
S04101	Drumflugh Road (75-77)	Band 1	6
S04102	Kilclean Road (80-82)	Band 1	6
S04103	Dunnyboe Road (85-93)	Band 1	12
S04104	Edergoole Road (87-89)	Band 1	6
S04105	Bonds Glen Road (149-151)	Band 1	6
S04111	Victoria Road (277-279)	Band 1	6
S04112	Ballyheather Road (121-123)	Band 1	6
S04113	Duncastle Road (52-60)	Band 1	15
S04114	Gortnagross Road (38-40)	Band 1	6
S04115	Ballynahaye Road(3)	Band 1	6
S04116	Glenedra Road (109-111)	Band 1	6
S04117	Scotstown Road (7-9)	Band 1	6
S04118	Trench Road (66-70)	Band 1	9
S04119	Tullymore Road (43-45)	Band 1	6
S04120	Drumsum Road (234-238)	Band 1	9
S04121	Bovevagh Road (37-41)	Band 1	6
S04122	When Road (21-23)	Band 1	6
S04124	McNally Park(1-6)	Band 1	18
S04127	Tibaran Cottages	Band 1	24
S04134	Minterburn Road(115-117)	Band 1	6
S04135	Springwell Cresent(1-6)	Band 1	21
S04136	Corickbeg Road(15-17)	Band 1	6
S04137	Whitelough Road(29-31)	Band 1	6
S04138	Killycurry Road(30-32)	Band 1	6
S04139	Lough Road(29-31)	Band 1	9
S04140	Derryork Road(33-35)	Band 1	6
S04141	Brisland Road(3-5)	Band 1	6
S04142	Belfast Road(56-58)	Band 1	6
S04143	Bearney Road(55-61)	Band 1	12
S04144	Rehaghy Road(64-66)	Band 1	6
S04145	Hillside Road(7-9)	Band 1	6
S04146	Killinchy Road(96-100)	Band 1	9
S04159	Windmill Road(71-73)	Band 1	6
S04161	Drumalig Road (62-64)	Band 1	6
S04162	Carnteel Road (122-124)	Band 1	6

CAR ID	WWTWs Name	AIR13 Band	AIR13 Reported PE
S04873	Grove Road(21-23)	Band 1	6
S04877	Ballinderry Road (45-49) Antrim	Band 1	9
S04884	Conthem Rd	Band 1	29
S05182	Beech Hill South	Band 1	54
S05186	Letterbreen	Band 1	88
S05188	Lower Rashee Road (15-21)	Band 1	12
S05189	Ballywalter(Retention Tank)	Band 4	2383
S05286	Reaskmore Road	Band 1	12
S05369	Legcloghfin Road Cranagh	Band 1	63
S05533	The Oyster Yard WWTW	Band 1	60
S05546	Diviny NEW ST	Band 1	19
S05568	Clanabogan South WwTW	Band 1	18
S05412	Ballyhalbert Victoria	Band 4	4709

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												
GENERAL												
	Area name:-											
1	Annual average resident connected population	000	1								1,483.2	C3
2	Annual average non-resident population	000	1								28.8	C3
3	Volume of sewage collected (daily average)	MI/d	1								318.7	B3
4	Total connected properties	nr	0								665,214	A2
5	Area of Sewerage District	km ²	0								13,520	B2
B SEWERAGE DATA												
6	Total length of sewer	km	0								15,254	B3
C Costs												
7	Sewerage: Direct Costs	£000	0								15,957	
8	Sewerage: Power Costs	£000	0								5,155	
9	Sewerage: Service Charges	£000	0								157	
10	Sewerage: General & Support Expenditure	£000	0								7,433	
11	Sewerage: Functional Expenditure	£000	0								23,390	

Table 17a Sewerage Explanatory Factors- Sewerage Sub-Area Explanatory Factors

Line 1 - Annual average resident connected population (Total)

AIR11	Confidence Grade	AIR12	Confidence Grade	AIR13	Confidence Grade
1,459.5 x 10 ³ *	C3	1,472.6 x 10 ³ *	C3	1,483.2 x 10³	C3

*Recalculated using Revised Estimated Visitors to NI from GB and Overseas (2010; 2011)

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 AIR13: Table 13: Line 10, the total connected population (comprising resident and non-resident population) is 1,512,024 x 10³
- **According to AIR13: Table 17a: Line 2, the annual average non-resident population is 28.792 x 10³**
- By calculation, the annual average resident connected population = 1,512.024 x 10³ - 28.792 x 10³ = **1,483.232 x 10³**

As there have been revisions to the Total Connected Population figures, originally reported in AIR11 and AIR12: Table 13: Line 10 and revisions to the overseas visitor nights information for 2010 and 2011, originally published in the *‘Results from the Northern Ireland Passenger Survey’ (NIPS)*, NI Water has recalculated outturns for AIR11 and AIR12 to serve as comparators.

	AIR11	AIR12
Table 13 Line 10 – Total Connected Population	1,485,705*	1,499,069*
Table 17a Line 2 – Annual Average Non-Resident Population	26,238**	26,501**
Annual Average Resident Connected Population (Total)	1,459,467***	1,472,568***

*Recalculated to include non-resident population

**Recalculated using Revised Estimated Visitors to NI from GB and Overseas (2010; 2011)

***Recalculated to include non-resident population and using Revised Estimated Visitors to NI from GB and Overseas (2010; 2011)

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

The AIR13 figure of 1,483.2 x 10³ is 10.7 x 10³ higher than the recalculated AIR12 figure of 1,472.6 x 10³. This represents an increase of 0.7% and is attributed to an increase in total connected sewerage population of 13.0 x 10³ and an increase in annual average non-resident connected sewerage population of 2.3 x 10³.

Confidence Grade

There are two figures associated with the calculation of AIR13: Table 17a: Line 1: Column 9. The first figure is derived from AIR13: Table 13: Line 10 and was allocated a confidence grade of B3. The second figure is derived from AIR13: 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** will be allocated to Table 17a: Line 1: Column 9.

Line 2 - Column 9 - Annual average non-resident population (Total)

AIR11	Confidence Grade	AIR12	Confidence Grade	AIR13	Confidence Grade
26.2 x 10 ^{3*}	C3	26.5 x 10 ^{3*}	C3	28.8 x 10³	C3

*Recalculated using 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

This year, NI Water has changed its methodology for calculating the number of overseas + RoI visitor nights. This change has been prompted by:

1. Delays in the publication of the HOTRA Survey, the source of RoI visitor nights information, as the 2011 survey results were only published on 11 October 2012.
2. Knowledge that there have been revisions to the overseas visitor nights information for 2010 and 2011, originally published in the 'Results from the Northern Ireland Passenger Survey' (NIPS), and that there may be a similar revision to the 2012 information
3. Recognition that overseas and RoI visitor trends may differ.

In order to overcome these issues, a new methodology has been developed, based on the historical relationship between bed-space data, RoI visitor nights data and overseas visitor nights data.

Statement detailing estimation method used including date of data on which estimate is made

The following table provides a summary of the bed-space, RoI visitor nights and overseas visitor nights data for 2010, 2011 and 2012.

	2010	2011	2012
Hotel Bed-Spaces Sold	2,555,800 ¹	2,592,200 ¹	2,803,570 ¹
Guest House & B&B Bed-Spaces Sold	552,300 ¹	544,200 ¹	618,730 ¹
Overseas Visitor Nights	8,322,000 ²	8,459,000 ²	N/A
RoI Visitor Nights	1,255,000 ³	1,214,000 ³	N/A
Total Non-Resident Visitor Nights	9,577,000 *	9,673,000 *	Unknown

Note 1. Data Source – Statistics on Accommodation monthly bulletins

Note 2. Data Source – Revised Estimated Visitors to NI from GB and Overseas (2010; 2011)

Note 3. Data Source – Household Travel Survey (2010; 2011)

*Recalculated using Revised Estimated Visitors to NI from GB and Overseas (2010; 2011)

The relationship between the data sets was established by solving a series of three equations, the variables 'a' and 'b' of which were found to be 3.200 and 2.530 respectively.

$$2,555,800a + 552,300b = 9,577,000$$

$$2,592,200a + 544,200b = 9,673,000$$

$$2,803,570a + 618,730b = \text{Unknown}$$

Based on the above equations, the estimated number of non-resident visitor nights in 2012 was 10,538,042.

The annual average non-resident population was estimated as follows:

$$10,538,042 / 366 \text{ nights} = \mathbf{28,792}$$

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*'.

NIW accepts that this methodology may not be ideal. However, methodology options have been severely restricted by a decline in the availability of current information relating to overseas and RoI/NI tourism. NI Water will use this new methodology going forward and until such time as the regularity and reliability of published data improves.

As there have been revisions to the overseas visitor nights information for 2010 and 2011, originally published in the '*Results from the Northern Ireland Passenger Survey*' (NIPS), NI Water has recalculated outturns for AIR11 and AIR12 to serve as comparators.

	AIR11	AIR12
Total Non-Resident Visitor Nights	9,577,000*	9,673,000*
Nights	365	365
Annual Average Non-Resident Population (Total)	26,238*	26,501*

*Recalculated using Revised Estimated Visitors to NI from GB and Overseas (2010; 2011)

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

Since the only variable that features in the calculation of Table 17a: Line 2: Column 9 is the number of visitor nights, any change in the reported figure can be directly attributed to fluctuations in tourism levels.

A comparison of the estimated numbers of visitor nights in 2011 (9,673,000) and 2012 (10,538,042) reveals an increase of 865,042. According to NI Tourist Board's Tourism Barometer, the ni2012 Tourism Drive and related events as well as the opening of Titanic Belfast, the new visitor's centre at the Giant's Causeway and the Irish Open seem to have had a positive impact on the hotel and guesthouse sectors as both reported overall bed-night volumes to be up on last year.

Confidence Grade

The annual average non-resident population is an estimate based on several sources of information.

1. The publication '*Revised Estimated Visitors to NI from GB and Overseas*' provides only an estimate of the annual number of overseas non-resident visitor nights based on surveys conducted by DETINI.
2. The publication '*Household Travel Survey*' provides only an estimate of the annual number of RoI non-resident visitor nights, based on a random stratified sample. Each month, over 4,600 households (or approximately 0.3% of all private households) are randomly selected from the Electoral Register, where the selection is stratified by District Electoral Division.
3. The publication '*Statistics on Accommodation*' provides only an estimate of the numbers of bed-spaces sold, based on the extrapolation of data for a representative sample group of establishments.

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 AIR13 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 AIR13 has remained the same.

The difference between the AIR12 and the AIR13 figures is 4401. This can be explained by the following; New Connections during the 2012/13 reporting year and the remainder added through the BAU data cleanse or as a result of customer contacts. E.g. septic tank empty request, no water complaints.

Line 5 - Area of Sewerage District

The figure provided equates to the total land mass of Northern Ireland excluding major bodies of inland water. The same LPS product has been used to determine the Area of Sewerage District. There remains only one sewerage district for all of Northern Ireland. The confidence grade of the data will remain the same as the previous year.

Line 6 - Total length of sewer

There has been no change to the structure of the data reported on this year from the previous years that would directly affect the totals provided. The same queries have been used to extract the data from the Corporate Asset Register and have been checked to ensure that they are still relevant. There has been a slightly higher increase this year compared to the previous years as a result of the ADAI Infrastructure work package. This project aimed to fill gaps in the NIW infrastructure records where data was missing. In total 73.1Km of sewers were captured. However not all of these will have been included in the AIR13 figure as in some cases the ownership of these sewers will not have been determined. Full details of this work can be obtained from the ADAI Missing Infrastructure Stage 3 closure

report. 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 2013. Work is on-going, through the Cost to Serve Project, on the sewerage areas the costs will be split between. Cost to Serve is not fully implemented and therefore could not be used for AIR13. 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 in this area. 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 £1.2M from AIR12. This is driven by; a £0.4M increase in Employment Costs due to Voluntary Early Retirement (VER) payments, a £0.7M increase in Power due to a rise in energy tariffs, a £0.2M included under Service Charges which previously was included under General & Support and a £0.1M decrease in Hired & Contracted.

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 £0.7M from AIR12 due to rise in energy tariffs.

Line 9 – Services Charges

The figure for Service Charges agrees to Table 22, Line 7 Column 1. The cost for Sewerage is £0.2M; these costs were previously included in General & Support expenditure.

Line 10 – General & Support

The figure for General & Support costs agrees to Table 22, Line 10 Column 1. See Table 22 commentary and methodology. This is £0.6M higher than AIR12 primarily due to a change in the apportionment of M&E function costs between Sewerage & Sewage Treatment. The M&E costs are included in the in total General and Support. See Table 22 commentary.

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 £1.8M from AIR12. This is primarily driven increases in Power Costs and General & Support as outlined above.

**Table 17b – Sewerage Explanatory Factors (NIW only)
Sewerage 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 AIR13 are:

LIMS Code	LIMS Name	Confirmed PE	AIR12 Band
S34AG	Carrickfergus WWTW	32026	Band 6
S34AK	Belfast WWTW	365000	Band 6
S37AB	Dunmurry WWTW	45888	Band 6
S37AA	Lisburn (New Holland) WWTW	67199	Band 6
S34AD	Newtownbreda WWTW	40002	Band 6
S15BS	Larne WWTW	28116	Band 6
S34AE	Whitehouse WWTW	87958	Band 6
S15AO	Antrim (Milltown) WWTW	66254	Band 6
S13BE	Ballymena (Tullaghgarley) WWTW	82830	Band 6
S25AC	Dungannon (Moygashel) WWTW	78942	Band 6
S27AC	Newry WWTW	58276	Band 6
S45IB	Omagh WWTW	38720	Band 6
S43CI	Culmore WWTW	133823	Band 6
S47HK	Enniskillen WWTW	26537	Band 6
S17HF	North Coast WWTW	76357	Band 6

Details of WWTW upgrades within the AIR13 reporting period are:

LIMS Code	LIMS Name	Type of Upgrade	Completion Date
S34AG	Carrickfergus WWTW	None	
S34AK	Belfast WWTW	Base Maintenance	Dec 2012
S37AB	Dunmurry WWTW	Upgrade Scheme	May/June 2012
S37AA	Lisburn (New Holland) WWTW	None	
S34AD	Newtownbreda WWTW	Upgrade Scheme	May/June 2012
S15BS	Larne WWTW	Base Maintenance	Not handed over yet
S34AE	Whitehouse WWTW	Base Maintenance	Sep/Oct 2012
S15AO	Antrim (Milltown) WWTW	None	
S13BE	Ballymena (Tullaghgarley) WWTW	Base Maintenance	Apr 2013
S25AC	Dungannon (Moygashel) WWTW	None	
S27AC	Newry WWTW	Upgrade Scheme	Not handed over yet
S45IB	Omagh WWTW	None	
S43CI	Culmore WWTW	None	
S47HK	Enniskillen WWTW	None	
S17HF	North Coast WWTW	Base Maintenance	Not handed over yet

All consents reported have both BOD and SS as part of the consent as issued by Northern Ireland Environment Agency (NIEA).

There are no consents for ammonia by itself without accompanying BOD and SS consents.

The consent conditions as issued by NIEA are based on 95%ile limits.

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	17372	Band 5
S36BB	Kilkeel	10587	Band 5
S36BO	Newcastle	16263	Band 5
S17ED	Ballycastle	14006	Band 5
S15AA	Ballyclare	16488	Band 5
S17BP	Ballymoney (Glenstall)	21219	Band 5
S13CH	Cookstown	19824	Band 5
S13GK	Magherafelt	15933	Band 5
S27AA	Banbridge	22380	Band 5
S27AN	Tandragee	13659	Band 5
S27AD	Warrenpoint	14707	Band 5
S43GI	Limavady	16194	Band 5
S45JA	Strabane	20305	Band 5

Lines 9 -15 Costs

This table was populated in the same way as AIR12. The costs are a further breakdown by location of the Band 6 expenditure detailed in Table 17f NIW Only line 6 and are populated with the information available for the year ended 31st March 2013. 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 and Cost Reallocations 611X (this includes direct labours costs and & overhead charges). Service Charges in AIR13 now include environmental regulatory charges which in previous years were included in General & Support.

15 WWT'W's fall into Band 6 in accordance with the regulatory guidance for Table 17f and each of these have their own separate finance location – i.e. W location code.

Direct costs have increased by circa £0.9M from AIR12. £0.2M of this is due to the inclusion of environmental regulatory charges such as WML (Wastewater Management License) as direct costs where previously these were included as General & Support. Employment Costs have increased by £0.3M due to the number of staff who left on the VER scheme and therefore increased VER costs. Power costs have increased by £0.5M due to a rise in energy tariffs and the change in the split of the power at Belfast WWTW's. The Power at Belfast WWTW's, Column 1, has increased more significantly than others due to a change in the percentage split between the Incinerator and Belfast WWTW's. There is one meter at Duncrue Street and the Power team provide a split of costs between the Incinerator & Belfast WWTW's, the split in AIR12 was 36:64 whereas AIR13 is 42:58. The increases have been netted off against a £0.1M reduction of materials and consumables which is a direct result of further implementation of cost to serve and improved allocation of costs to sewage treatment and sludge treatment.

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 increased in AIR13 by £0.5M due to the rise in tariffs and a change in the split provided between the Belfast WWTW's and Incinerator.

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. 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 PPP Incinerators. 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 AIR12 was 36:64 and in AIR13 42:58 for the Belfast and Incinerators. No costs for the Incinerator have been included in this table in AIR13. The total for this line is the actual figure and not a sum of columns 1- 15 due to rounding.

Line 11 – Service Charges

Service Charges in AIR13 now include environmental regulatory charges which in previous years were included in general & support. £0.2M of direct costs are included in Band 6 for service charges.

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 £0.1M from AIR12. This is a direct result of further implementation of the Cost to Serve project and improved accuracy of costs, including direct labour, recorded against assets. See Table 22 commentary for further breakdown and explanation.

Line 13 – Functional Expenditure

This is a calculated line and is the total of Line 9 and Line 12. The total in the workings agrees to Table 22 (NIW Only) Column 2 Line 11. Costs have increased since AIR12 by £1.0M for the reasons mentioned above.

Line 14 – Terminal Pumping Costs

This information was populated in the same way as AIR12. Ballymena is the only works where the pumping station costs can be separately identified and have been included as part of direct costs. These have been identified separately in Column 3 Line 14.

Line 15 – Sludge Costs

Sludge treatment is a separate activity in the accounts and the direct costs are not included in Line 9 to Line 13.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 17c SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - NUMBERS (PPP Only)**

DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11
			TREATMENT CATEGORY										TOTAL
			PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS			
	ACTIVATED	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED				
A SMALL WORKS													
1	Number of STWs in size band 1	nr	0										
2	Number of STWs in size band 2	nr	0										
3	Number of STWs in size band 3	nr	0										
4	Number of STWs in size band 4	nr	0				1						1
5	Number of STWs in size band 5	nr	0					1					1
B LARGE WORKS													
6	Number of STWs in size band 6	nr	0		1			3					4
7	Total numbers of STWs	nr	0		1		1	4					6
C SMALL WORKS WITH AMMONIA CONSENTS													
8	Number of small STWs with NH3 consent (5 - 10mg/l)	nr	0					0					
9	Number of small STWs with NH3 consent (<= 5mg/l)	nr	0					2					

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 AIR12, PEs for 132 WWTWs have been updated.

Changes regarding WWTWs from the AIR12 period are as follows:

- 6 WWTWs have been rationalised and pumped away/gravity away to larger WWTWs in last financial year.
- 2 WWTWs have been decommissioned.
- 4 WWTWs have been re-designated as private
- 2 WWTWs have been adopted from 3rd party ownership
- 2 WWTWs have been commissioned

This is a net decrease of 8 WWTWs from AIR12 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. 1,028 including the screened outfalls (2 No.) and the unscreened outfalls (8 No). The number of WWTWs in Table 15 line 8 is 1,018 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 check to be carried out, which have been completed:

Number of large STWs in each treatment category in table 17c (line 6, columns 1-10) should equal corresponding total number of large STWs reported in table 17b (line 8).

It should be noted that the AIR13 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 AIR13 comparison between the two figures.

Total Residential Population used to Calculate Table 17c for AIR13	1,245,347
Total Population connected to the sewerage system based on Table 13 Line 10	1,512,024
Difference	266,677

As can be seen there is a difference of 266,677. 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 AIR13 PPP PEs (based on the reported 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	71433	9410	62023
Armagh WWTW	20867	5244	15623
Richhill WWTW	3267	239	3028
Newtownards (Ballyrickard)	29883	10845	19038
Ballynacor WWTW	102467	52095	50372
Kinnegar	73219	32153	41066
Total	301136	109986	191,150

As can be seen the residential population for the PPP sites is now approximated to be 191,150. If this is added to the 17c figure (1,245,347) then the total is 1,436,497 which is 75,527 less than the figure held in Table 13. However for the first time the figure included Table 13 Line 10 includes both residential population and tourist population. Therefore if the AIR13 tourist population for both NIW sites (33,942PE) and PPP sites (1,964) is included this gives a revised figure of 1,472,403 which is 39,621PE less than the figure held in Table 13, approximately 2.6% 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 699, 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 AIR12 to AIR13

Name of Works	CAR ID	AIR12 Band Sizes	AIR13 Band Sizes	Comment
Ballyavelin Road (133-135)	S04123	Band 1		It was confirmed that WWTWs is a Private WWTWs
Ballybogie Road(7-9)	S04875	Band 1		It was confirmed that this WWTWs now gravitates to Culmore
Ballycarry	S00267	Band 3	Band 4	Pe Updated with latest AIR13 Trade Information
Ballyhalbert Victoria	SO5412	Band 3	Band 4	Portavogie WWTWs is now a pumpaway to Ballyhalbert Victoria
Ballystrudder (Retention Tank)	S00264	Band 3	Band 4	It was confirmed that Whitehead now pumps to this WWTWs
Castledawson	S01609	Band 3		This WWTWs is now a pumpaway to Magherafelt
Castlewellan Road (Dromore)	S02892	Band 1		It was confirmed that WWTWs is private
Clanabogan South WwTW	S05568		Band 1	It was confirmed that this WWTWs was adopted by NIW for AIR13
Cross Lane 9-22 ST	S05572		Band 1	This WWTWs replaced an existing WWTWs - Cross lane (9-22) under RWIP
Cross Lane(9-22)	S02427	Band 1		This WWTWs was replaced by a New WWTWs - Cross lane 9-22 ST (SO5572)
Diviny	S02403	Band 1		This WWTWs was replaced by a new WWTWs - Diviny New ST
Diviny NEW ST	S05546		Band 1	This WWTWs replaced an existing WWTWs - Diviny under RWIP
Glenarm (Retention Tank)	S01461	Band 3		This WWTWs is now a pumpaway to Tully Road Headworks
Goragh Road	S02287	Band 1		It was confirmed that WWTWs is private
Moss-side (WWTW)	S01194	Band 2	Band 3	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13

Name of Works	CAR ID	AIR12 Band Sizes	AIR13 Band Sizes	Comment
Mullaghbane (Forkhill)	S02279	Band 3		It was confirmed that this WWTWs is now a pumpaway to Forkhill
Portavogie(Retention Tank)	S00209	Band 4		This WWTWs is now a pumpaway to Ballyhalbert Victoria
Rathfriland Road	S02157	Band 1		It was confirmed that WWTWs is private
The Oyster Yard WWTW	S05533		Band 1	It was confirmed that this WWTWs was adopted by NIW for AIR13
Whitehead (WWTW)	S00452	Band 4		It was confirmed that this WWTWs now pumps to Ballystrudder

The table below highlights the changes in treatment category from AIR12 to AIR13.

Name of Works	CAR ID	AIR12 Treatment Category	AIR13 Treatment Category	Comment
Ballyavelin Road (133-135)	S04123	Sec Bio	Private	It was confirmed that WWTWs is a Private WWTWs
Ballybogie Road(7-9)	S04875	Sec Bio	Gravity Away	It was confirmed that this WWTWs now gravitates to Culmore
Castledawson	S01609	Sec Bio	Pumpaway	This WWTWs is now a pumpaway to Magherafelt
Castlewellan Road (Dromore)	S02892	Prim	Private	It was confirmed that WWTWs is private
Clanabogan South WwTW	S05568		Sec Bio	It was confirmed that this WWTWs was adopted by NIW for AIR13
Cross Lane 9-22 ST	S05572		Sec Bio	This WWTWs replaced an existing WWTWs - Cross lane (9-22) under RWIP
Cross Lane(9-22)	S02427	Sec Bio	Decommissioned	This WWTWs was replaced by a New WWTWs - Cross lane 9-22 ST (SO5572)
Diviny	S02403	Sec Bio	Decommissioned	This WWTWs was replaced by a new WWTWs - Diviny New ST
Diviny NEW ST	S05546		Sec Bio	This WWTWs replaced an existing WWTWs - Diviny under RWIP
Garvetagh	S03117	Sec Act	Sec Bio	This WWTWs was upgraded under the RWWIP project
Glack (WWTW)	S03118	Sec Act	Sec Bio	This WWTWs was upgraded under the RWWIP project
Glenarm (Retention)	S01461	Sea Out Unscreen	Pumpaway	This WWTWs is now a pumpaway to Tully Road

Name of Works	CAR ID	AIR12 Treatment Category	AIR13 Treatment Category	Comment
Tank)				Headworks
Glenstall	S01109	Sec Act	Ter A2	This WWTWs was upgraded for AIR13
Goragh Road	S02287	Prim	Private	It was confirmed that WWTWs is private
Killough (Retention Tank)	S00275	Sea Out Unscreen	Prim	This WWTWs was previously incorrectly designated as a Sea Out Unscreened. It was confirmed there is a Prim tank on-site.
Limavady (WWTW)	S03162	Sec Act	Ter A2	This WWTWs was upgraded for AIR13
Moyagall Road(115-117)	S01799	Prim	Sec Bio	This WWTWs was upgraded with a Prim Tank & Filter replacing a previous Prim Tank
Mullaghbane (Forkhill)	S02279	Sec Bio	Pumpaway	It was confirmed that this WWTWs is now a pumpaway to Forkhill
Omagh (WWTW)	S03999	Sec Act	Ter A2	This WWTWs was upgraded for AIR13
Portaferry (2)	S05200	Sec Act	Ter A2	It was confirmed there is UV disinfection on site
Portavogie (Retention Tank)	S00209	Sea Out Screen	Pumpaway	This WWTWs is now a pumpaway to Ballyhalbert Victoria
Procklis	S01450	Sec Act	Sec Bio	This WWTWs was upgraded under the RWWIP project
Rathfriland Road	S02157	Prim	Private	It was confirmed that WWTWs is private
Slaght	S01453	Sec Act	Sec Bio	This WWTWs was upgraded under the RWWIP project
Springfield	S03222	Sec Act	Sec Bio	This WWTWs was upgraded under the RWWIP project
Swatragh (WWTW)	S01637	Ter B1	Sec Bio	This WWTWs was upgraded for AIR13
The Oyster Yard WWTW	S05533		Sec Bio	It was confirmed that this WWTWs was adopted by NIW for AIR13
Whitehead (WWTW)	S00452	Sea Out Prel	Pumpaway	It was confirmed that this WWTWs now pumps to Ballystrudder

**Difference between AIR12 and AIR13 for total in Table 17c
(column 11, row 7)**

Total Number of Works for AIR 12 -	1,036
Total Number of Works for AIR 13 -	1,028
Total Difference -	8

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 AIR12 to present are summarised below:

Line	Nr AIR12	Nr AIR13	Difference	Comment
8	43	44	1	1 new site- Annaghugh
9	54	54	0	1 new site- Mullans (Antrim) 1 site removed – Bready

PPP Only

Lines 1-9

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 13 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	
			TREATMENT CATEGORY										TOTAL	
			PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS				CG
	ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED					
A SMALL WORKS														
1	Load received by STWs in size band 1	kg BOD5/day	0											
2	Load received by STWs in size band 2	kg BOD5/day	0											
3	Load received by STWs in size band 3	kg BOD5/day	0											
4	Load received by STWs in size band 4	kg BOD5/day	0			196							196	B2
5	Load received by STWs in size band 5	kg BOD5/day	0				1,252						1,252	B2
B LARGE WORKS														
6	Load received by STWs in size band 6	kg BOD5/day	0		4,393		12,227						16,620	B2
7	Total loads rec'd (daily average all size bands)	kg BOD5/day	0		4,393		196	13,479					18,068	B2
C SMALL WORKS WITH AMMONIA CONSENTS														
8	Load rec'd by small STW w. NH3 consent (5 - 10mg/l)	kg BOD5/day	0											
9	Load rec'd by small STW w. NH3 consents (< = 5mg/l)	kg BOD5/day	0				1,448							

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 AIR12, PEs for 132 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.

1,036 WWTWs were reported on in Table 17d for AIR12. Hence there has been an overall net reduction of 8 in the number of WWTWs being reported from AIR12 to AIR13, which is summarised as follows:

- 5 WWTWs (Castledawson, Glenarm (Retention Tank), Mullaghbane (Forkhill), Portavogie (Retention Tank), Whitehead WWTW) were pumped to other works,
- 2 WWTWs (Cross lane (9-22), Diviny) have been decommissioned,
- 1 WWTWs (Ballybogie Road (7-9)) is now a gravity away to another WWTWs,
- 4 WWTWs (Ballyavelin Road (133-135), Castlewellan Road (Dromore), Goragh Road, Rathfriland Road) have been designated as private,
- 2 WWTWs (Cross Lane 9-22 ST, Diviny New ST) have been commissioned,
- 2 WWTWs (Clanabogan South WWTW, The Oyster Yard WWTW) have been adopted from 3rd party ownership

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. However the AIR11 Trade Information, for these nursing homes and clinics, has been maintained for AIR13 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 the AIR12 commentary it was reported that for the first time Trade Effluent Section depicted trade effluent from the incinerator to Belfast WWTWs, this equates to 64422Pe for AIR13. At this time Asset Performance Team (APT) liaised with the

Operational Staff, OTST and the Process Scientist in an attempt to understand the true value of loading on Belfast WWTWs. Although flow and load measurement had been ongoing at Belfast WWTWs this information was portraying widely differing values, which had not been validated by the Operational or OTST staff. Therefore it was agreed at this time that the Belfast WWTWs AIR12 theoretical PE, (354,507 at the time), computed by APT, should be used as the Operational staff were of the opinion that the Incinerator's trade effluent was reflected in this figure. However since this date the Flow & Load information was validated and a figure of 365,000Pe has been agreed for AIR13.

We have assumed the Bands to be:

Small works

- a. size band 1 <= 15kg BOD5/day (population equivalent: 0 - 250)
- b. size band 2 >15 but <= 30kg BOD5/day (population equivalent: 251 - 500)
- c. size band 3 >30 but <= 120kg BOD5/day (population equivalent: 501 – 2,000)
- d. size band 4 >120 but <= 600kg BOD5/day (population equivalent: 2,001 – 10,000)
- e. size band 5 >600 but <= 1500kg BOD5/day (population equivalent: 10,001 – 25,000)

Large Works

- f. size band 6 > 1500kg 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. 1,028 including the screened outfalls (2 No.) and the unscreened outfalls (8 No.).

The Reporters Report on AIR09 recommended that NIW correct possible overestimation of total STW 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.***'

A Flow and Load (F&L) Survey Group has been established within NIW to discuss and agree on the outputs from F&L surveys and compare against theoretical PE studies. The Flow and Load Group decide on the actual PE which should be adopted or indeed that more investigative work is required before a conclusion can be reached.

During the AIR13 period F&L Survey actual PEs have been adopted by the F&L Survey Group for 8 WWTWs.

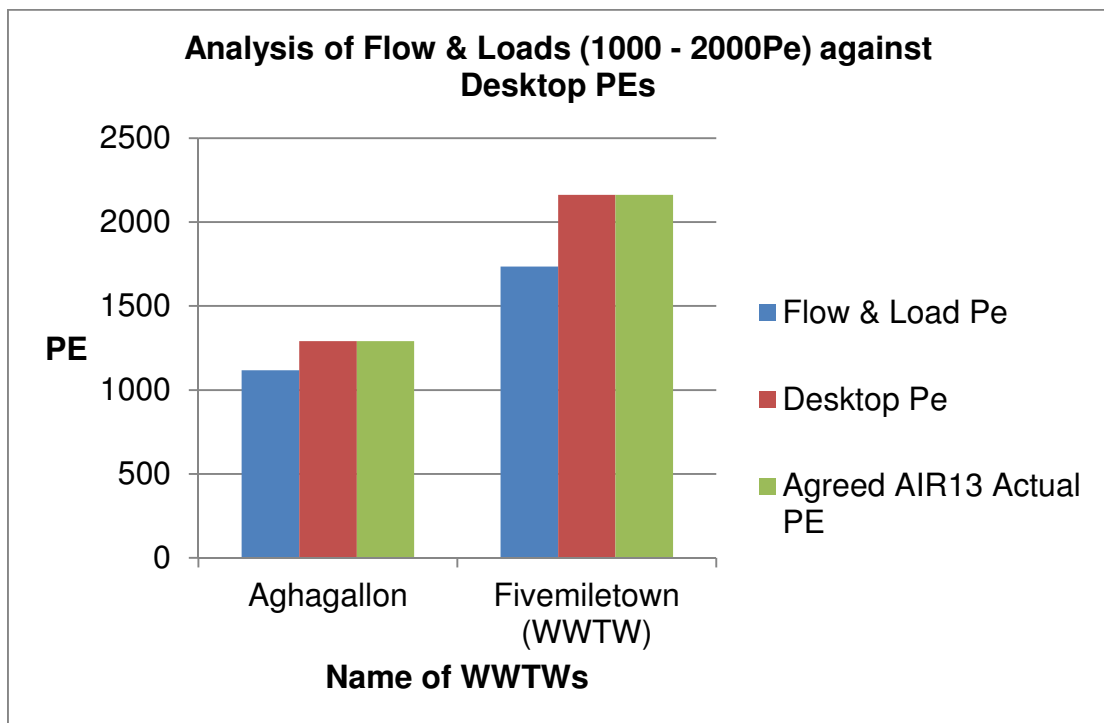
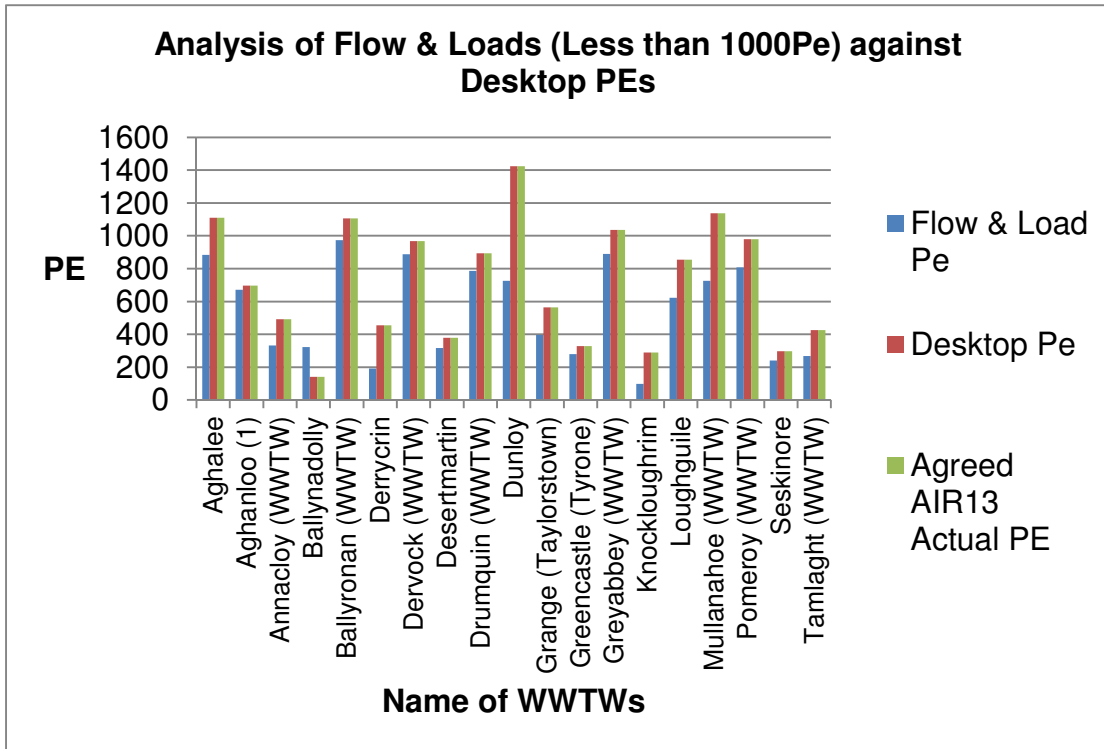
Table comparing actual PEs adopted from F&L Surveys against AIR12 PEs for 8 WWTWs

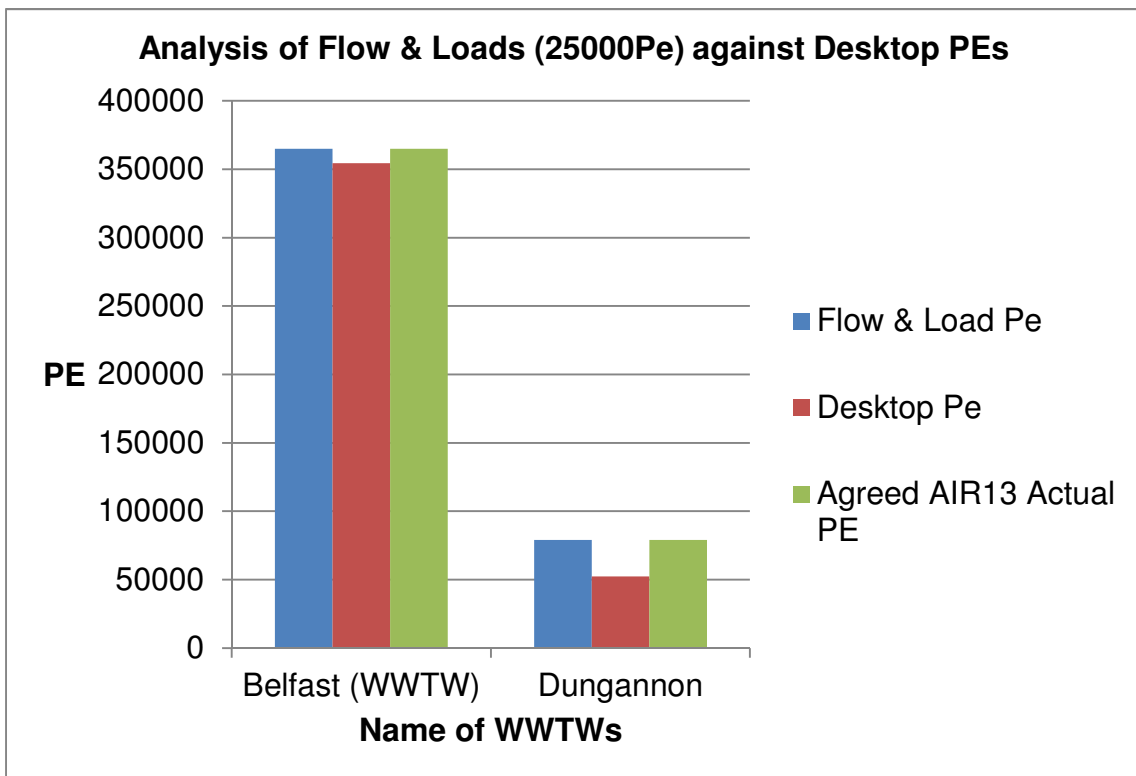
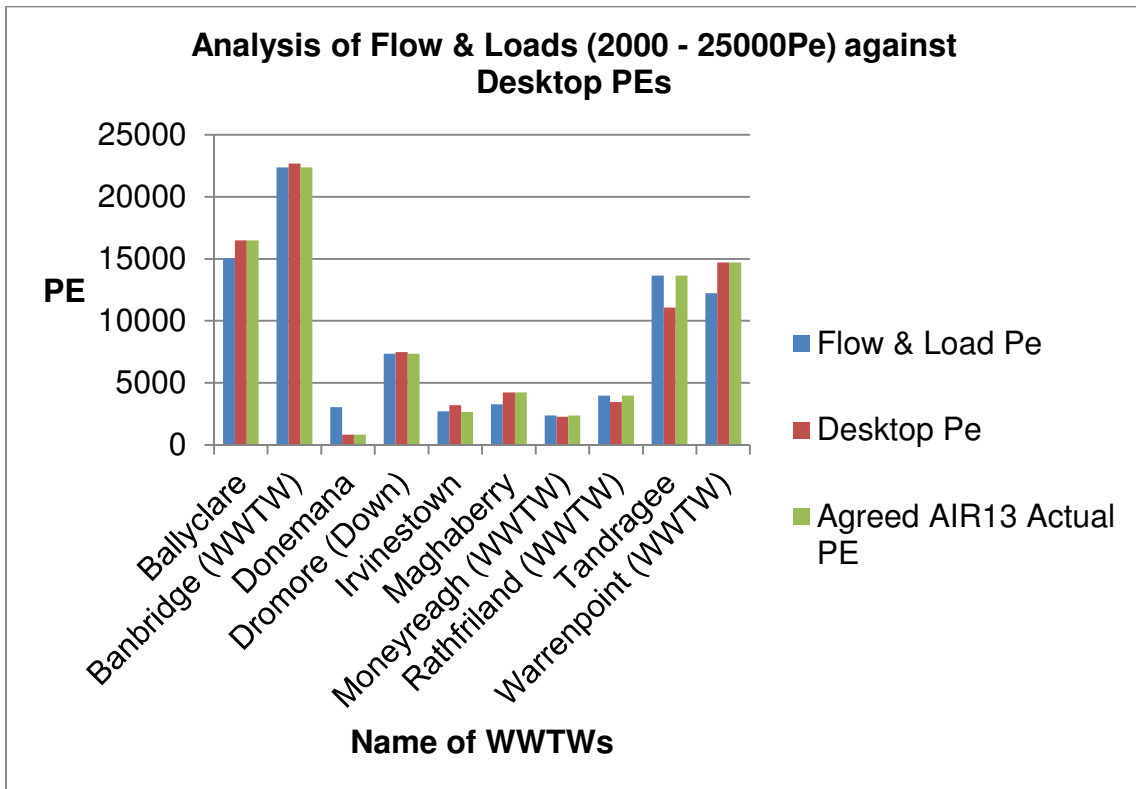
Name of WWTWs	Adopted Actual PE Output from F&L Survey	AIR12 Actual PE (Based on a Desktop Study)	% Difference (-ve indicates AIR12 PE is higher)
Banbridge (WWTW)	22380	22680	-1.34
Belfast (WWTW)	365000	354507	2.87
Dromore (Down)	7355	7493	-1.88
Dungannon	78942	52319	33.72
Irvinestown	2669	3207	-20.16
Moneyreagh (WWTW)	2380	2274	4.45
Rathfriland (WWTW)	3977	3455	13.13
Tandragee	13659	11074	18.93
Average % Difference			6.22

As can be seen the 8 Flow & Load PEs adopted for AIR13 are on average 6.22% higher than the previous AIR12 Desktop PEs. However the inclusion of Dungannon in the comparison distorts this average as the Flow & Load figure is over 30% higher than the previous desktop PE. The reason for the Dungannon WWTWs disparity is that over 2/3rds of the PE discharging to the catchment is associated with trade and the Flow & Load Survey enables shock loads to be calculated which is not possible in a desktop PE. Dungannon is unique as a catchment within NIW with having such a disparity between residential and trade PEs. If Dungannon is omitted from the sample then the average difference is only 2.29%. This is not a large enough sample group to justify extrapolating the differences into the larger population of WwTW sites but over time as additional Flow & Load Survey PEs are adopted this may be possible.

It should be noted that a further 25 Flow & Load Surveys were carried out during AIR13 and outputs analysed by the F&L Survey Group with theoretical PE study results. The Group decided to adopt the theoretical PEs over the F&L Survey outputs for various reasons, including the inability of the flow measurement devices to accurately measure low flows.

Below is series of graphs highlighting the analysis of Flow & Load Survey outputs with Theoretical PEs for a series of thresholds.





As can be seen of the 21 WWTWs (refer to top 2 graphs) below 2000PE the Desktop (theoretical) PE was recommended for adoption in all cases. This was mainly as a consequence of the inability of the flow measurement devices to record low flows being received at the WWTWs. However Flow & Load Surveys are still beneficial at WWTWs under 2000PE to highlight anomalies such as high infiltration or rogue trade discharges.

For the remaining 12 WWTWs (refer to bottom 2 graphs above) the Flow & Load was adopted at 8 of the WWTWs. The F&L PE was discounted for the remaining 4 WWTWs for reasons such as the positioning of the meter in relation to overflows, high rainfall during the F&L survey and short duration of the survey. The confidence in the PEs at these 33 WWTWs has increased since AIR12 due to the analysis carried out by the F&L Survey Group and this should increase to other WWTWs in the coming years. The confidence grades for the actual loadings at these 33 WWTWs 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 33 works to the overall number of works in each line is too small.

A document entitled 'Asset Standard for Determination of Flow and Loads for Wastewater Treatment Works and Wastewater Networks' was drafted by WRC on behalf of NIW and this standard has been adopted going forward. This should further increase confidence in analysis carried out between F&L Survey outputs and theoretical PE results. It also details the procedure to be used for the actual F&L surveys. NIW is also presently reviewing its asset standard for derivation of theoretical actual PEs.

Actual PEs have also been adopted from a number of theoretical PE studies which have been carried out during the AIR 13 period.

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 32no. WWTWs included in the table.

Name of Works	CAR ID	AIR12 Actual PE	AIR13 Actual PE	Difference* *(-ve indicates figure larger)	Comments
Acton	S02111	96	75	21	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Aghanloo (1)	S02989	552	697	-145	
Annacloy (WWTW)	S00292	383	492	-109	
Ballycarry	S00267	1754	2116	-362	Pe Updated with latest AIR13 Trade Information
Ballyhalbert Victoria	S05412	2719	5834	-3115	Portavogie WWTWs is now a pumpaway to Ballyhalbert Victoria
Ballystrudder (Retention Tank)	S00264	1193	5729	-4536	It was confirmed that Whitehead now pumps to this WWTWs
Donaghmore (WWTW)	S02840	1622	2000	-378	A population appraisal was carried out at this site and following an APT review, including update with latest AIR13 Trade Information, this was adopted for AIR13
Dorsy	S02267	39	59	-20	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13

Name of Works	CAR ID	AIR12 Actual PE	AIR13 Actual PE	Difference* *(-ve indicates AIR12 figure larger)	Comments
Dungannon	S02850	52319	78942	-26623	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Fivemiletown (WWTW)	S03113	2659	2163	496	Pe Updated with latest AIR13 Trade Information
Forkhill	S02270	708	1746	-1038	It was confirmed that Mullaghbane (Forkhill) now pumps to this site
Garrison (WWTW)	S03115	896	701	195	An on-site count was carried out by APT and adopted for AIR13
Garvetagh	S03117	81	66	15	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Gortscreagan	S03127	82	68	13	
Greyabbey (WWTW)	S00214	1223	1036	187	
Irvinestown	S03137	3207	2669	538	
Killinchy (WWTW)	S00252	2922	5811	-2889	Pe Updated with latest AIR13 Trade Information
Kilskeery	S03148	91	60	31	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Kircubbin (WWTW)	S04881	1698	1361	337	A population Report was carried out by McAdam Design Consultants in 2013 and this was amended with the latest occupancy rates and adopted for AIR13.
Leitrim (New)	S02705	118	150	-32	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Maghaberry	S02412	7513	4225	3288	
Moss-side (WWTW)	S01194	421	509	-88	
Mountain View (Drumintee)	S02278	70	113	-43	
Mounthill	S01465	136	243	-107	
Pomeroy (WWTW)	S01593	1193	979	214	
Procklis	S01450	73	92	-20	
Rathfriland (WWTW)	S02713	3455	3977	-522	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Rathlin (Retention Tank)	S00902	150	117	33	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Springfield	S03222	83	61	22	
Tandragee	S02174	11074	13659	-2585	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Tully Road Headworks	S03975	2158	3226	-1068	It was confirmed that Glenam now pumps to this WWTWs
Tullyroan	S02600	52	61	-9	Pe Updated with latest AIR13 Trade Information

*(-ve indicates AIR12 figure larger)

The total load of 110446 kg BOD/day from all NIW (only) WWTWs reconciles with the Total load entering sewerage system (BOD/year) of *40312.75 t BOD/year*, from Table 15 line 5.

The Total load receiving primary treatment in table 17d (line 7, column 1) of 785.3 kg BOD/day is consistent (allowing for rounding up/down and conversions) with total load receiving primary treatment in table 15 (line 3) of *286.63 t BOD/yr*.

The Total load receiving secondary and tertiary treatment in table 17d (line 7, sum of columns 2–7) i.e. 107353.1 kg BOD/day is consistent with total load receiving secondary treatment in table 15 (line 2) i.e. *39183.88 t BOD/yr*.

The Total load receiving preliminary treatment in table 17d (line 7, column 8) of 1,894.5 kg BOD/day is consistent (allowing for rounding up/down and conversions) with total load receiving preliminary treatment in table 15 (line 4) (both include non-resident population) of *691.49 t BOD/yr*.

The table below depicts changes in PEs at WWTWs from AIR12 to AIR13.

Significant changes which will occur in the short to medium term with respect to rationalization of WWTWs will include the pumpaway of Hillsborough to Lisburn (New Holland) and Aughil, Benone & Drumavally pumping away to the new Magilligan WWTWs.

The following table depicts how PE changes have occurred at WWTWs during the last financial year.

Name of Works	CAR ID	AIR12 Actual PE	AIR13 Actual PE	Difference*	AIR12 Band	AIR13 Band	Band Size Change
Acton	S02111	96	75	21	Band 1	Band 1	
Aghagallon	S02393	1304	1291	14	Band 3	Band 3	
Aghalee	S02394	1205	1111	94	Band 3	Band 3	
Aghanloo (1)	S02989	552	697	-145	Band 3	Band 3	
Annacloy (WWTW)	S00292	383	492	-109	Band 2	Band 2	
Annalong (WWTW)	S00300	3266	3242	24	Band 4	Band 4	
Annsborough	S02687	5920	5877	43	Band 4	Band 4	
Antrim (WWTW)	S01422	65789	66254	-465	Band 6	Band 6	
Ardglass (WWTW)	S00268	3167	2826	341	Band 4	Band 4	
Armoy (WWTW)	S01172	903	818	85	Band 3	Band 3	
Ballyavelin Road (133-135)	S04123	12	Private	12	Band 1		Y
Ballybogie Road(7-9)	S04875	6	Gravity Away	6	Band 1		Y
Ballycarry	S00267	1754	2116	-362	Band 3	Band 4	Y
Ballycastle (WWTW)	S01071	14019	14006	13	Band 5	Band 5	
Ballyclare	S01467	18148	16488	1660	Band 5	Band 5	
Ballyhalbert Victoria	SO5412	2719	5834	-3115	Band 3	Band 4	Y
Ballyhornan Outfall	S04090	914	913	1	Band 3	Band 3	
Ballykelly (L/Derry)	S03016	4819	4827	-8	Band 4	Band 4	
Ballykinler (WWTW)	S00299	2258	2257	1	Band 4	Band 4	
Ballymena (WWTW)	S01456	80361	82830	-2469	Band 6	Band 6	
Ballynadolly	S00327	138	141	-3	Band 1	Band 1	
Ballynahinch (Down)	S00311	7944	7942	2	Band 4	Band 4	
Ballystrudder (Retention Tank)	S00264	1193	5729	-4536	Band 3	Band 4	Y
Banbridge (WWTW)	S02102	22680	22380	300	Band 5	Band 5	
Belfast (WWTW)	S00345	354507	365000	-10493	Band 6	Band 6	
Bushmills (WWTW)	S01178	5545	5539	6	Band 4	Band 4	
Capecastle	S01179	55	47	8	Band 1	Band 1	
Carrickfergus (WWTW)	S00261	32029	32026	3	Band 6	Band 6	
Castledawson	S01609	1305	Pumpaway	1305	Band 3		Y

Name of Works	CAR ID	AIR12 Actual PE	AIR13 Actual PE	Difference*	AIR12 Band	AIR13 Band	Band Size Change
Castleberg (WWTW)	S03042	4855	4858	-3	Band 4	Band 4	
Castlewellan Road (Dromore)	S02892	6	Private	6	Band 1		Y
Clanabogan South WwTW	S05568		18	-18		Band 1	Y
Coalisland	S02828	9929	9877	52	Band 4	Band 4	
Cookstown (WWTW)	S01582	19688	19824	-136	Band 5	Band 5	
Cross Lane 9-22 ST	S05572	0	25	-25		Band 1	Y
Cross Lane(9-22)	S02427	25	Decommissioned	25	Band 1		Y
Culmore (WWTW)	S03071	131457	133823	-2366	Band 6	Band 6	
Derryhale	S02570	1120	1117	3	Band 3	Band 3	
Dervock (WWTW)	S01102	987	967	20	Band 3	Band 3	
Desertmartin	S01614	361	380	-19	Band 2	Band 2	
Diviny	S02403	19	Decommissioned	19	Band 1		Y
Diviny NEW ST	S05546	0	19	-19		Band 1	Y
Donaghmore (WWTW)	S02840	1622	2000	-378	Band 3	Band 3	
Donemana	S03103	846	815	31	Band 3	Band 3	
Donnybrewer	S03080	5286	5213	73	Band 4	Band 4	
Dorsy	S02267	39	59	-20	Band 1	Band 1	
Downpatrick (WWTW)	S00771	17472	17372	100	Band 5	Band 5	
Draperstown	S01615	3296	3275	21	Band 4	Band 4	
Dromara (WWTW)	S00316	1379	1380	-1	Band 3	Band 3	
Dromore (Down)	S02127	7493	7355	138	Band 4	Band 4	
Dromore Highlands	S03085	126	116	10	Band 1	Band 1	
Dungannon	S02850	52319	78942	-26623	Band 6	Band 6	
Dungiven	S03101	4777	4759	18	Band 4	Band 4	
Dunloy	S01108	1602	1424	178	Band 3	Band 3	
Dunmurry	S00346	45798	45888	-90	Band 6	Band 6	
Enniskillen	S03218	25490	26537	-1047	Band 6	Band 6	

Name of Works	CAR ID	AIR12 Actual PE	AIR13 Actual PE	Difference*	AIR12 Band	AIR13 Band	Band Size Change
Fivemiletown (WWTW)	S03113	2659	2163	496	Band 4	Band 4	
Forkhill	S02270	708	1746	-1038	Band 3	Band 3	
Garrison (WWTW)	S03115	896	701	195	Band 3	Band 3	
Garvetagh	S03117	81	66	15	Band 1	Band 1	
Gilford (WWTW)	S02162	2480	2447	33	Band 4	Band 4	
Glenarm (Retention Tank)	S01461	1068	Pumpaway	1068	Band 3		Y
Glenstall	S01109	22030	21219	811	Band 5	Band 5	
Goragh Road	S02287	6	Private	6	Band 1		Y
Gortin (Tyrone)	S03124	743	717	25	Band 3	Band 3	
Gortscreagan	S03127	82	68	13	Band 1	Band 1	
Grange (Taylorstown)	S01442	551	565	-14	Band 3	Band 3	
Greencastle (Tyrone)	S03132	379	328	51	Band 2	Band 2	
Greenisland (WWTW)	S00263	9599	9617	-18	Band 4	Band 4	
Greyabbey (WWTW)	S00214	1223	1036	187	Band 3	Band 3	
Greysteel (WWTW)	S03123	2177	2192	-15	Band 4	Band 4	
Hilltown (WWTW)	S02701	2146	2143	3	Band 4	Band 4	
Irvinestown	S03137	3207	2669	538	Band 4	Band 4	
Kilkeel (WWTW)	S00313	10857	10587	270	Band 5	Band 5	
Killinchy (WWTW)	S00252	2922	5811	-2889	Band 4	Band 4	
Killyleagh (WWTW)	S00273	8556	8072	484	Band 4	Band 4	
Kilrea	S01156	2779	2799	-20	Band 4	Band 4	
Kilskeery	S03148	91	60	31	Band 1	Band 1	
Kircubbin (WWTW)	S04881	1698	1361	337	Band 3	Band 3	
Larne (WWTW)	S02044	27967	28116	-149	Band 6	Band 6	
Leitrim (New)	S02705	118	150	-32	Band 1	Band 1	
Limavady (WWTW)	S03162	16669	16194	475	Band 5	Band 5	
Lisburn (New Holland)	S00329	65714	67199	-1485	Band 6	Band 6	
Lisnaskea (WWTW)	S03171	6426	6392	34	Band 4	Band 4	
Lisowan	S00287	51	50	1	Band 1	Band 1	

Name of Works	CAR ID	AIR12 Actual PE	AIR13 Actual PE	Difference*	AIR12 Band	AIR13 Band	Band Size Change
Lough Macrory (WWTW)	S03174	616	661	-45	Band 3	Band 3	
Loughguile	S01115	851	854	-4	Band 3	Band 3	
Maghaberry	S02412	7513	4225	3288	Band 4	Band 4	
Maghera (L/Derry)	S01629	6590	6583	7	Band 4	Band 4	
Magherafelt (WWTW)	S01621	14674	15933	-1259	Band 5	Band 5	
Magheramason	S03177	593	591	2	Band 3	Band 3	
Martinstown	S01445	612	578	34	Band 3	Band 3	
Moira	S02429	5083	5085	-2	Band 4	Band 4	
Moneymore (WWTW)	S01589	2821	2828	-7	Band 4	Band 4	
Moneyreagh (WWTW)	S00337	2274	2380	-106	Band 4	Band 4	
Moorfields	S01446	317	273	44	Band 2	Band 2	
Moss-side (WWTW)	S01194	421	509	-88	Band 2	Band 3	Y
Mountain View (Drumintee)	S02278	70	113	-43	Band 1	Band 1	
Mounthill	S01465	136	243	-107	Band 1	Band 1	
Mountjoy (Dungannon)	S02849	489	486	3	Band 2	Band 2	
Moy (WWTW)	S02859	3206	3448	-242	Band 4	Band 4	
Mullaghbane (Forkhill)	S02279	1038	Pumpaway	1038	Band 3		Y
Mullans (Antrim)	S01118	260	260	1	Band 2	Band 2	
Newmills (WWTW)	S02852	844	723	121	Band 3	Band 3	
Newry (WWTW)	S02685	62490	58276	4214	Band 6	Band 6	
Newtownbreda (WWTW)	S00342	40031	40002	29	Band 6	Band 6	
Newtownbutler (WWTW)	S03200	1732	1731	1	Band 3	Band 3	
Newtownstewart (WWTW)	S03202	2171	2170	1	Band 4	Band 4	
North Coast (WWTWs)	S04150	76266	76357	-91	Band 6	Band 6	
Omagh (WWTW)	S03999	39432	38720	712	Band 6	Band 6	
Pomeroy (WWTW)	S01593	1193	979	214	Band 3	Band 3	
Portavogie(Retention Tank)	S00209	3115	Pumpaway	3115	Band 4		Y
Poyntzspass (WWTW)	S02156	880	813	68	Band 3	Band 3	
Procklis	S01450	73	92	-20	Band 1	Band 1	

Name of Works	CAR ID	AIR12 Actual PE	AIR13 Actual PE	Difference*	AIR12 Band	AIR13 Band	Band Size Change
Rathfriland (WWTW)	S02713	3455	3977	-522	Band 4	Band 4	
Rathfriland Road	S02157	12	Private	12	Band 1		Y
Rathlin (Retention Tank)	S00902	150	117	33	Band 1	Band 1	
Saintfield (WWTW)	S00290	5082	5048	34	Band 4	Band 4	
Slaght	S01453	127	124	3	Band 1	Band 1	
Springfield	S03222	83	61	22	Band 1	Band 1	
Strabane	S03223	20197	20305	-108	Band 5	Band 5	
Stranocum	S01123	559	544	15	Band 3	Band 3	
Tamlaght (WWTW)	S03224	475	426	49	Band 2	Band 2	
Tamnamore (WWTW)	S02862	634	617	17	Band 3	Band 3	
Tandragee	S02174	11074	13659	-2585	Band 5	Band 5	
The Oyster Yard WWTW	S05533		60	-60		Band 1	Y
Trillick (WWTW)	S03231	603	602	1	Band 3	Band 3	
Tully Road Headworks	S03975	2158	3226	-1068	Band 4	Band 4	
Tullyroan	S02600	52	61	-9	Band 1	Band 1	
Warrenpoint (WWTW)	S02720	14952	14707	245	Band 5	Band 5	
Whitehead (WWTW)	S00452	4536	Pumpaway	4536	Band 4		Y
Whitehouse	S00265	87943	87958	-15	Band 6	Band 6	
			Total	-36926			

*(-ve indicates AIR12 figure larger)

The change in PE equates to an increase in load of 2215.56kg BOD/day (i.e. 36926 x 0.06 for 60g/hd/day) from AIR12 to AIR13

Difference between AIR13 and AIR12 for the total load entering WWTWs as shown in Table 17d - column 11, row 7

Total Load Received at WWTWs for AIR12 -	108230.3
Total Load Received at WWTWs for AIR 13 -	110445.9
Total Difference -	-2215.6

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 AIR12 to AIR3.

Name of Works	CAR ID	AIR12 Actual PE	AIR13 Actual PE	PE Change*	Comments
Annaghugh (WWTW)	S02602	323	323	-323	This WWTWs is an addition to the WWTWs list with Ammonia between 5-10
Derryhale	S02570	1120	1117	3	Pe Updated with latest AIR13 Trade Information
Donaghmore (WWTW)	S02840	1622	2000	-378	A population appraisal was carried out at this site and following an APT review, including update with latest Air13 Trade Information, this was adopted for AIR13
Draperstown	S01615	3296	3275	21	Pe Updated with latest AIR13 Trade Information
Greencastle (Tyrone)	S03132	379	328	51	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13

Name of Works	CAR ID	AIR12 Actual PE	AIR13 Actual PE	PE Change*	Comments
Hilltown (WWTW)	S02701	2146	2143	3	Pe Updated with latest AIR13 Trade Information
Lisnaskea (WWTW)	S03171	6426	6392	34	
Maghaberry	S02412	7513	4225	3288	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Maghera (L/Derry)	S01629	6590	6583	7	Pe Updated with latest AIR13 Trade Information
Magherafelt (WWTW)	S01621	14674	15933	-1259	It was confirmed that Castledawson WWTWs now pumps to this site and PE was also updated with latest AIR13 Trade Effluent PE
Newtownstewart (WWTW)	S03202	2171	2170	1	Pe Updated with latest AIR13 Trade Information
Strabane	S03223	20197	20305	-108	Pe Updated with latest AIR13 Trade Information
Tamlaght (WWTW)	S03224	475	426	49	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
			Total	1389	

*(-ve Indicates AIR12 PE Higher)

The change in PE equates to a reduction in load of 83.34kg/d (i.e. 1389 x 0.06 for 60g/hd/day) from AIR12 to AIR13, for line 8.

Total Load rec'd by small WWTWs with NH3 consents (5-10mg/l) for AIR12-	5859.1
Total Load rec'd by small WWTWs with NH3 consents (5-10mg/l) for AIR13-	5775.7
Total Difference –	83.4

Changes in Line 9 - Small Works with Ammonia Consent (between 0 and 5) from AIR12 to AIR13.

Name of Works	CAR ID	AIR12 Actual PE	AIR13 Actual PE	PE Change*	Comments
Ballynahinch (Down)	S00311	7944	7942	2	PE Updated with latest AIR13 Trade Information
Downpatrick (WWTW)	S00771	17472	17372	100	
Dromara (WWTW)	S00316	1379	1380	-1	
Killinchy (WWTW)	S00252	2922	5811	-2889	
Moneyreagh (WWTW)	S00337	2274	2380	-106	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Saintfield (WWTW)	S00290	5082	5048	34	PE Updated with latest AIR13 Trade Information
Ballyclare	S01467	18148	16488	1660	A population appraisal was carried out at this site and following an APT review, including update with latest AIR13 Trade Information, this was adopted for AIR13
Dunloy	S01108	1602	1424	178	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Grange (Taylorstown)	S01442	551	565	-14	
Cookstown (WWTW)	S01582	19688	19824	-136	PE Updated with latest AIR13 Trade Information
Loughguile	S01115	851	854	-4	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Moneymore (WWTW)	S01589	2821	2828	-7	PE Updated with latest AIR13 Trade Information
Mullans (Antrim)	S01118	260	260	-260	This WWTWs is an addition to the WWTWs list with Ammonia between <=5
Pomeroy (WWTW)	S01593	1193	979	214	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Annsborough	S02687	5920	5877	43	PE Updated with latest AIR13 Trade Information

Banbridge (WWTW)	S02102	22680	22380	300	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Coalisland	S02828	9929	9877	52	PE updated with latest AIR13 Trade Information
Dromore (Down)	S02127	7493	7355	138	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Moira	S02429	5083	5085	-2	PE updated with latest AIR13 Trade Information
Mountjoy (Dungannon)	S02849	489	486	3	
Poyntzspass (WWTW)	S02156	880	813	68	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Rathfriland (WWTW)	S02713	3455	3977	-522	
Tandragee	S02174	11074	13659	-2585	
Bready (WWTW)	S03971	305	305	305	This WWTWs has been removed from the WWTWs list with Ammonia between ≤ 5
Dungiven	S03101	4777	4759	18	PE Updated with latest AIR13 Trade Information
Irvinestown	S03137	3207	2669	538	A Flow & Load was carried out at this site and following an APT review this was adopted for AIR13
Limavady (WWTW)	S03162	16669	16194	475	PE updated with latest AIR13 Trade Information
Lough Macrory (WWTW)	S03174	616	661	-45	A population appraisal was carried out at this site and following an APT review this was adopted for AIR13
Newtownbutler (WWTW)	S03200	1732	1731	1	PE Updated with latest AIR13 Trade Information
				Total	-2442

*(-ve Indicates AIR12 PE Higher)

The change in PE equates to an increase in load of 146.52 kg/d (i.e. 2442 x 0.06 for 60g/hd/day) from AIR12 to AIR13 for line 9.

Total Load rec'd by small WWTWs with NH3 consents (0-5mg/l) for AIR12-	12650.1
Total Load rec'd by small WWTWs with NH3 consents (0-5mg/l) for AIR13-	12796.6
Total Difference -	-146.5

PPP Only

Lines 1 – 7

The variation in load data from AIR12 is solely due to the variation in influent loads received by the same PPP works from the NI Water catchments over the AIR13 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 AIR13 Period.

Specific Company Commentary;

- There have been no changes to the number of PPP operated STW's in each Treatment Category.
- There are currently no Capital Works Project plans to close, or divert flows arriving to, PPP operated works.

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	37.005	166.271	698.057	7.796	0.000	4.559	13.787	0.000	0.000	9.394	936.870
2	Direct costs of STWs in size band 2	£000	3	0.000	98.423	316.387	56.486	0.000	105.250	10.475	0.000	10.192	0.000	597.212
3	Direct costs of STWs in size band 3	£000	3	20.697	855.047	870.291	139.156	151.285	163.352	114.075	34.539	0.000	10.697	2,359.138
4	Direct costs of STWs in size band 4	£000	3	43.222	2,280.269	468.383	132.465	293.772	67.040	149.005	66.244	20.714	0.000	3,521.113
5	Direct costs of STWs in size band 5	£000	3	0.000	561.746	0.000	229.819	1,316.161	0.000	136.277	77.794	0.000	0.000	2,321.797
B LARGE WORKS														
6	Direct costs of STWs in size band 6	£000	3	0.000	3,426.640	0.000	848.545	2,420.434	0.000	0.000	0.000	0.000	0.000	6,695.619
C ALL WORKS														
7	Total direct costs of STWs - all sizes	£000	3	100.923	7,388.395	2,353.118	1,414.267	4,181.652	340.201	423.619	178.577	30.907	20.091	16,431.749
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	100.923	7,388.395	2,353.118	1,414.267	4,181.652	340.201	423.619	178.577	30.907	20.091	16,431.749
10	Sewage Treatment: Power costs	£000	3	16.137	4,463.144	650.662	680.836	2,407.892	91.421	160.068	60.773	1.424	0.000	8,532.356
11	Sewage Treatment: service charges	£000	3	11.654	275.019	166.837	54.095	158.677	22.750	32.037	29.644	5.934	2.957	759.605
12	Sewage Treatment: General and Support	£000	3	75.880	2,419.930	1,958.017	540.392	1,392.306	303.055	238.667	44.049	8.819	8.357	6,989.471
13	Sewage Treatment: Functional Expenditure	£000	3	176.803	9,808.325	4,311.135	1,954.658	5,573.958	643.256	662.286	222.626	39.725	28.448	23,421.220

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 17f SEWERAGE EXPLANATORY FACTORS
SEWAGE TREATMENT WORKS - COSTS (PPP only)**

DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	TOTAL			
			TREATMENT CATEGORY													
			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										0.000			
2	Direct costs of STWs in size band 2	£000	3										0.000			
3	Direct costs of STWs in size band 3	£000	3										0.000			
4	Direct costs of STWs in size band 4	£000	3				49.485						49.485			
5	Direct costs of STWs in size band 5	£000	3					156.497					156.497			
B LARGE WORKS																
6	Direct costs of STWs in size band 6	£000	3					2,151.389					2,151.389			
C ALL WORKS																
7	Total direct costs of STWs - all sizes	£000	3				0.000	0.000	0.000	49.485	2,307.886	0.000	0.000	0.000	0.000	2,357.371
8	Sludge Treatment and Disposal Adjustments	£000	3												0.000	
9	Sewage Treatment: Direct costs	£000	3				0.000	0.000	0.000	49.485	2,307.886	0.000	0.000	0.000	0.000	2,357.371
10	Sewage Treatment: Power costs	£000	3				0.000	0.000	0.000	49.485	2,307.886	0.000	0.000	0.000	0.000	2,357.371
11	Sewage Treatment: service charges	£000	3												0.000	
12	Sewage Treatment: General and Support (NIW)	£000	3							42.918	24.715	98.860			166.493	
13	Sewage Treatment: Functional Expenditure	£000	3				0.000	42.918	0.000	74.200	2,406.746	0.000	0.000	0.000	0.000	2,523.864

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	37.005	166.271	698.057	7.796	0.000	4.559	13.787	0.000	0.000	9.394	936.870
2	Direct costs of STWs in size band 2	£000	3	0.000	98.423	316.387	56.486	0.000	105.250	10.475	0.000	10.192	0.000	597.212
3	Direct costs of STWs in size band 3	£000	3	20.697	855.047	870.291	139.156	151.285	163.352	114.075	34.539	0.000	10.697	2,359.138
4	Direct costs of STWs in size band 4	£000	3	43.222	2,280.269	468.383	181.950	293.772	67.040	149.005	66.244	20.714	0.000	3,570.598
5	Direct costs of STWs in size band 5	£000	3	0.000	561.746	0.000	229.819	1,472.658	0.000	136.277	77.794	0.000	0.000	2,478.294
B LARGE WORKS														
6	Direct costs of STWs in size band 6	£000	3	0.000	3,426.640	0.000	848.545	4,571.823	0.000	0.000	0.000	0.000	0.000	8,847.008
C ALL WORKS														
7	Total direct costs of STWs - all sizes	£000	3	100.923	7,388.395	2,353.118	1,463.752	6,489.538	340.201	423.619	178.577	30.907	20.091	18,789.120
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	100.923	7,388.395	2,353.118	1,463.752	6,489.538	340.201	423.619	178.577	30.907	20.091	18,789.120
10	Sewage Treatment: Power costs	£000	3	16.137	4,463.144	650.662	730.321	4,715.778	91.421	160.068	60.773	1.424	0.000	10,889.727
11	Sewage Treatment: service charges	£000	3	11.654	275.019	166.837	54.095	158.677	22.750	32.037	29.644	5.934	2.957	759.605
12	Sewage Treatment: General and Support	£000	3	75.880	2,462.848	1,958.017	565.107	1,491.166	303.055	238.667	44.049	8.819	8.357	7,155.964
13	Sewage Treatment: Functional Expenditure	£000	3	176.803	9,851.243	4,311.135	2,028.858	7,980.704	643.256	662.286	222.626	39.725	28.448	25,945.084

Table 17f - Sewage Treatment Works**NIW only Lines 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, a further improvement from AIR12. Table 17f has been completed based on the figures available at for the year ended 31st March 2013 for sewage treatment – Activity 510 less M & E expenditure which is treated as general & support. The total columns and rows in the table may not be a sum of the appropriate columns and rows due to rounding.

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. This is a significant improvement from AIR12.

Direct Costs include Power 521X, Contractors 531X, Other Contractors 532X, Materials 541X, Chemicals 548X and Cost Reallocations 611X (this includes direct labours costs and & overhead charges). Service Charges in AIR13 now include environmental regulatory charges which in previous years were included in General & Support.

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 increased in Lines 1-4 from AIR12 by circa £0.6M primarily due to the improved allocation of costs to individual WWTW's through further implementation of Cost to Serve. Power costs have increased due to a rise in the energy tariffs and employment costs increased a direct result of increased numbers leaving on VER and therefore increased VER costs. Service Charges include Environmental Regulatory Fees such as WML (Wastewater Management License) and these costs are included in Direct Costs in AIR13 where previously they were included in General & Support. £0.4M of direct costs in Band 1-4 relate to service charges.

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.

The costs against this line have decreased by circa £0.1M primarily due to the improved allocation of direct costs across all sites through EAM as discussed earlier.

Line 6 – Size band 6

This line agrees with Line 9 in Table 17b. No PPP sites have been included.

The costs have increased from AIR12 by circa £0.9M primarily due to increased Power costs £0.5M and increase in Employment Costs £0.3M.

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 PPP Incinerators. 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 AIR12 was 36:64 and in AIR13 was 42:58 for the Belfast and Incinerators. No costs for the Incinerator have been included in this table in AIR13. Power costs have increased due to a rise in energy tariffs and the change in the split of costs at Belfast WWTW's.

Power costs for TPS that are intrinsically connected to the works cannot be separately identified as there is only one electric meter. Ballymena has been noted separately and is included in the power costs in this table.

Employment Costs have increased due to the number of staff who left on the VER scheme and therefore VER costs have increased.

Service Charges in AIR13 now include environmental regulatory charges which in previous years were included in general & support. £0.2M of direct costs are included in Band 6 for service charges.

The further implementation of Cost to Serve has resulted in improved coding of direct labour between sewage treatment and sludge treatment. Direct Labour postings are used to make apportionments of admin activities across all the sites, and this has resulted in a more accurate allocation to all columns.

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 increased since AIR12 by circa £1.3M. This is primarily due to an increase 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 has increased by circa £0.9M primarily due to a rise in energy tariffs

and change in the split of costs at the Belfast WWTW's. This figure agrees with Table 22, Column 2 Line 2.

Line 11 – Service Charges

Environmental Regulatory Charges are now included in Direct Costs whereas previously they were included in General & Support. £0.7M of environmental regulatory charges are included in Sewage treatment and example being the WML (Wastewater Management License).

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 decreased by £0.8M from AIR12, primarily due to a change in treatment of Regulatory charges which are now included in direct costs whereas previously they were included in general & support. The apportionment of M&E function costs between Sewerage & Sewage Treatment has also changed. The M&E costs are included in the in total general and support and fewer costs have been apportioned to Sewage Treatment in AIR13.

See Table 22 commentary. A detailed breakdown of general & support is included in the commentary for Table 21 & 22.

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 AIR12 by circa £0.6M for all the reasons mentioned under the lines above. Refer to Table 22 commentary for further explanation.

Table 17f – Sewage Treatment Works – Costs (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 AIR12 and AIR 13.

Power costs have increased from AIR12 as a result of increased energy tariffs and consumption.

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. These costs are slightly lower in AIR13 as there was an additional member of staff in post to cover for a staff member on long term sick leave in 2011/12.

The total on this line reconciles to table 22 line 10 column 2.

Table 17f - Sewage Treatment Works (Consolidated - NIW Total)

Table 17f has been completed based on the figures available for the year ended 31st March 2013.

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 AIR12. 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									1,447.5	C3	35.7	C3							1,483.2	C3
2 Amount of sewage sludge	ttds	1									31.3	A2	0.8	B2							32.0	B2
3 Sludge treatment: direct costs	£000	3									0.000		0.000							2,560.991		2560.991
4 Sludge disposal: direct costs	£000	3									2,872.245		130.791							0.000		3003.036
5 Sludge treatment & disposal: direct costs	£000	3									2,872.245		130.791							2,560.991		5564.027
6 Sludge treatment & disposal: power costs	£000	3									0.000		0.000							1,382.765		1382.765
7 Sludge treatment & disposal: service charges	£000	3									0.000		0.000							176.386		176.386
8 Sludge treatment & disposal: general & support exp.	£000	3									1,103.782		0.000							947.464		2051.247
9 Sludge treatment & disposal: functional expenditure	£000	3									3,976.027		130.791							3,508.456		7615.274

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.

Columns 5 & 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 2012/13 (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's grit & screenings removed as part of the treatment process and disposed of under Tender C480.

Column 5 has been based on the total sewage sludge disposal (NIW Only) data from SLS and the WW Sludge Management monthly report. Column 6 is an estimated quantity of WwTW's grit & screenings removed as part of the treatment process and disposed of under Tender C480.

The methodology has not changed from AIR12. 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 2013. The total columns and rows in the table may not be a sum of the appropriate columns and rows due to rounding.

Line 3 – Sludge Treatment: Direct Costs

Expenditure has been input in Column 9.

There is an increase in sludge treatment costs from AIR12 to AIR13 of circa £0.4M. £0.2M of this is a result of the increase of direct costs coded to Sludge treatment through the further implementation of the cost to serve project. Sludge facilities have been created so that costs can be recorded more accurately. The remaining £0.2M increase is a result of the inclusion of Service Charges as a direct cost whereas previously this was included in General & Support.

Sludge treatment costs for WWTW's are coded using activity 621 and can be separately identified to populate Column 9.

Power costs in AIR13 do not include the Incinerator or any PPP sites.

Line 4 - Sludge Disposal: Direct Costs

Column 5 and 6 have been populated in this line. Total Direct Costs have decreased by circa £0.2M from AIR12. This is mainly due to a decrease in Sludge Transport costs which is a direct result of improved Sludge Quality.

There is a small cost in Column 6 which relates to grit & screening and has been based on volumes disposed off to Landfill through the C018 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 increased by circa £0.2M from AIR12, primarily due to further implementation of the cost to serve project and therefore more accurate costs have been recorded against Sludge Treatment.

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 meter 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 AIR12 was 36:64 and in AIR13 is 42:58 for the Belfast and Incinerators. No costs for the Incinerator have been included in this table in AIR13. Power costs have increased by £0.1M due to the change in the split of the Incinerator & Belfast and a rise in energy tariffs.

Line 7 - Sludge treatment & disposal: Service Charges

The Service Charges figure has increased by £0.2M as in previous years this line was included under General & Support. 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 AIR12 and with further implementation of cost to serve, labour costs are more accurately split between sludge & sewage treatment. The reduction in costs from AIR12 of circa £1.3M is primarily due to primarily due to a change in the apportionment of M&E function costs between Sewerage & Sewage Treatment. The M&E costs are included in total general and support and no costs have been apportioned to Sludge Treatment & Disposal in AIR13. Environmental Regulatory charges have been included in Line 7 in AIR13 and removed from General & Support. In previous years Environmental Regulatory Charges were apportioned across all Columns in Table 22. See Table 22 commentary. A detailed breakdown of general & support is included in the commentary for Table 21 & 22.

Line 9 – Sludge treatment & disposal: Functional Expenditure

This is a calculated line and is the total of Line 5 and Line 8. Total costs have decreased by circa £1.1M from AIR12 for the reasons mentioned in the lines above.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 18 REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
PROFIT AND LOSS ACCOUNT FOR YEAR ENDING 31 MARCH**

DESCRIPTION		UNITS	DP	1	2	3	4
				2009-10	2010-11	2011-12	2012-13
1	Turnover	£m	3	347.569	345.740	354.819	366.398
2	Operating costs (excluding HCD)	£m	3	-234.938	-212.643	-200.677	-202.316
3	Historical cost depreciation	£m	3	-25.055	-41.689	-46.216	-44.871
4	Operating income	£m	3	0.264	0.108	0.212	0.334
5	Operating profit	£m	3	87.840	91.516	108.138	119.545
6	Other income	£m	3	0.000	0.000	0.000	0.000
7	Net interest receivable less payable	£m	3	-37.716	-47.520	-50.468	-55.067
8	Profit on ordinary activities before taxation	£m	3	50.124	43.996	57.670	64.478
9	Current tax	£m	3	0.000	0.000	0.000	0.000
10	Deferred tax	£m	3	-14.273	-31.433	-18.472	-24.872
11	Profit on ordinary activities after taxation	£m	3	35.851	12.563	39.198	39.606
12	Extraordinary items	£m	3	0.000	0.000	0.000	0.000
13	Profit for the year	£m	3	35.851	12.563	39.198	39.606
14	Dividends	£m	3	-34.537	-35.570	-25.604	-26.587
15	Retained profit for the year	£m	3	1.314	-23.007	13.594	13.019

Table 18 – HC Profit and Loss account for the year ending 31 March 2013

- 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 2012/13 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	17.923*	0.000	(3.675)	(0.490)	3.273	17.031*
Omega	27.689	(3.053)	0.000	0.000	0.000	24.636
Kinnegar	2.102	(0.250)	0.000	0.000	0.000	1.852
Total	47.714	(3.303)	(3.675)	(0.490)	3.273	43.519

* includes lease interest of £11.913m – shown in line 7 of Table 18.

- PPP elements of line 2 'Operating Costs' are £28.333m. Additionally within Line 3 'HCD' there are depreciation costs for the Alpha Project of £3.273m.
- 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 policies (UK GAAP). However as the corporation tax computation for the company will be based on the IFRS statutory accounts it has been agreed with the Regulator that the tax charge and provision in the regulatory accounts should be the same as those shown in the statutory accounts.

The deferred tax charge in the statutory accounts for the period of £25.206m is higher than the charge based on the standard rate of corporation tax in the UK (24%). The differences are explained below:

Reconciliation of effective tax rate	£m
Profit for the year	110.232
Income tax expense	<u>25.206</u>
Profit before income tax	<u>135.438</u>
Income tax using the Company's domestic tax rate (24%)	32.505
Reduction in tax rate	(8.289)
Non deductible expenses	1.747
Adjustment to prior years	<u>(0.757)</u>
	<u>25.206</u>

The deferred tax charge in line 10 of £24.872m is based on the statutory accounts charge of £25.206m less an allocation of £0.334m deferred tax to unappointed activities.

The statutory accounts deferred tax charge of £25.206m can be shown as follows:

Deferred tax

	£m
Origination/ reversal of timing differences	(34.252)
Adjustment to prior years	0.757
Effect of change in tax rate	<u>8.289</u>
Total deferred tax charge	<u>(25.206)</u>
Tax charge on profit on ordinary activities	<u>(25.206)</u>

Table 19 shows a deferred tax liability on the balance sheet of £187.416m after an allocation of £1.634m of the final balance to unappointed activities. This total liability under UKGAAP of £189.050m reconciles to the IFRS based statutory accounts balance at 31 March 2013 of £187.819m as the IFRS Accounts are required to show the deferred tax amount associated with the pension account (£1.231m) within the deferred tax balance rather than the UKGAAP approach of showing this amount separately within the pension account. The statutory balance of £187.819m can be summarised as follows:

	2013 £m Excluding Pension	2013 £m Pension	2013 £m Total
Opening liability	163.792	2.291	166.083
Current year deferred tax charge/ (credit) to profit and loss account	33.486	0.026	33.512
Current year deferred tax charge/ (credit) to profit and loss account (effect of tax rate)	(8.228)	(0.078)	(8.306)
Prior year deferred tax (credit)/charge to P&L	-	-	-
Current year deferred year tax charge to the Statement of Total Recognised Gains and Losses	0.000	(3.470)	(3.470)
Closing liability	<u>189.050</u>	<u>(1.231)</u>	<u>187.819</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 £m
Benefit obligation at end of year	(161.142)
Fair value of plan assets at end of year	<u>155.788</u>
Net obligation	(5.354)
Less deferred tax	<u>1.231</u>
Pension asset after deferred tax	<u>(4.123)</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-13	31-Mar-12
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%
Rate of increase in pensions in deferment	3.40%	3.25%
Inflation	3.40%	3.25%

Weighted average assumptions used to determine net pension cost for year ended:

	31-Mar-13	31-Mar-12
Discount rate	5.00%	5.50%
Expected long-term return on plan assets	5.30%	6.19%
Rate of compensation increase	4.25%	4.50%
Rate of increase in pensions in payment	3.25%	3.50%
Inflation	3.25%	3.50%

Any changes to the assumptions from 2012 to 2013 have been advised by the independent actuaries.

There is a pension liability at 31 March 2013 of (£4.123m) (after deferred tax). There has been no contributions relating to funding this deficit position. Contributions to the fund in 2012/13 were 26.9% of pensionable pay. (2010/11: 26.9%).

A dividend of £26.965m was proposed, approved and paid in 2012/13 and thus there is a dividend in Table 18 for the current year.

The full dividend for 2012/13 was £26.965m with £26.587m apportioned to appointed activities and £0.378m apportioned to unappointed activities (based on turnover).

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	£000
Table 18 Line 2	(202.316)
Add back HC amortisation of grants and contributions	(0.772)
CC amortisation of grants and contributions	4.513
CC depreciation	(150.895)
Table 20 line 2	(349.470)

Cost components in Operating Costs

The following cost components of Line 2 (£202.316m) exceed £5m in 2012-13:

Wages and Salaries	39.109m*
Other pension costs	9.464m*
Electricity	34.328m*
Rates	14.451m*
Contractors	18.820m*
Out sourced billing	6.013m
PPP Operating Charges –Omega	24.636m
Total	146.821m
	(72.6% of total Operating Costs)

* includes an amount relating to unappointed activities.

Interest

Interest received and payable can be summarised as follows:

	£m	£m
Interest received		
Bank Interest	0.134	
Other finance income	0.849	
Total Interest received		0.983
Interest Payable:		
On bonds held as security	(0.034)	
On all other loans	(44.103)	
On PPP finance lease	(11.913)	
Total Interest Payable		(56.050)
Net Interest		(55.067)

Capitalisation of costs

During 2012/13 £11.187m of costs were capitalised from the profit and loss account. This can be broken down as follows:

Cost	£m
Staff Costs	9.388
Labour charge	0.010
Vehicles and plant	0.005
Overheads capitalised	1.784
Total	11.187

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.

For 2012/13 a review was carried out of the assumptions used for the capitalisation of salaries, wages and overheads. This resulted in the identification of additional time spend by staff on capital projects and also a revision of the related overheads to be capitalised. The total costs capitalised has increased from £8.990m in 2011/12 to £11.187m in 2012/13 an increase of £2.197m (24.4%).

Comparison to prior year and PC10

A comparison to 2011/12 and to PC10 can be shown as follows:

	Actual	Actual	PC10
	2012 -2013	2011 -2012	2012 -2013
	£m	£m	£m
Sales	366.398	354.819	374.225
Expenditure	(246.853)	(246.681)	(247.389)
Net Operating Profit	119.545	108.138	126.836
Operating Margin	32.6%	30.5%	33.9%
Interest payable	(55.067)	(50.468)	(61.478)
Deferred tax	(24.872)	(18.472)	(17.840)
Profit for the year	39.606	39.198	47.518
Net Profit Margin	10.8%	11.1%	12.7%

Explanation of variances on sales, operating profit and interest payable are outlined in the commentary to Table 20.

Systems and controls

The company uses the Oracle financial system to produce monthly and annual accounting information. The Oracle General Ledger produces a trial balance and the detailed accounts are summarised to produce the year end statutory accounts. A series of spreadsheets are then used to analyse appointed and non appointed sales and costs to produce the financial information for the Regulatory Accounts and AIR Tables.

The company is progressing a major project to develop a costing system. In terms of regulatory reporting the main tables requiring costing information are Tables 21 and 22 and the commentaries for these tables detail how an interim costing solution is being used to populate these tables until the new costing system is in place.

This new costing solution is also intended to provide better information for the allocation of costs to non appointed activities which is currently based on a set of high level costing assumptions.

Internal Controls

The company continues to place great emphasis on internal financial controls throughout the organisation.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 18c REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
STATEMENT OF TOTAL RECOGNISED GAINS AND LOSSES**

DESCRIPTION		UNITS	DP	1	2	3	4
				2009-10	2010-11	2011-12	2012-13
A CAPITAL EXPENDITURE CATEGORIES							
1	Profit for the year	£m	3	35.851	12.563	39.198	13.019
2	Actuarial gains/losses on post employment plans	£m	3	-9.255	1.160	1.456	-11.535
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	26.596	13.723	40.654	1.484

Table 18c – STRGL (HCA)

Line 2 shows £11.535m of actuarial gains/losses on post employment plans.

Line 3 is nil as there are no other recognised gains or losses for the year.

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
				2009-10	2010-11	2011-12	2012-13
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	-34.537	-35.570	-25.604	-26.587
3	Total dividends	£m	3	-34.537	-35.570	-25.604	-26.587
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	0.249	0.214	0.109	0.134
9	Other interest payable	£m	3	-26.928	-35.519	-39.983	-44.137
10	Other finance charges - post employment costs	£m	3	0.288	0.000	1.156	0.849
11	Other finance charges	£m	3	-11.325	-12.215	-11.750	-11.913
12	Total net interest	£m	3	-37.716	-47.520	-50.468	-55.067

Table 18d – Analysis of dividends and interest charges

There has been no financial reorganisation during the year.

A dividend was proposed and approved in 2012/13 and this is shown on line 2. The full dividend for 2012/13 was £26.966m with £26.587m apportioned to appointed activities and £0.379m apportioned to unappointed activities (based on turnover).

Interest receivable (£0.134m) relates to monies held on deposit.

Interest payable of £44.137m is comprised of £44.104m relating to the loan notes held with DRD and £0.033m relating to interest payable on cash bonds. The interest on loan notes has increased from last year by £4.209m (10.6%) primarily due to the drawdown of £75m additional loan notes in 2012/13. 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 income is £0.849m for a finance credit relating to post employment plans calculated by the actuaries of the pension fund at year end.

During 2012/13 an amount of £11.913m (2011/12: £11.750m) 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 2012/13 budget and PC10:

	Actual	Budget	PC10
	£m	£m	£m
Net Interest payable	44.104	44.448	48.524
Loan notes	882.560	882.560	968.340

The drawdown of loans is £85.780m less than the PC10 projected for 2012/13. 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
			2009-10	2010-11	2011-12	2012-13
A FIXED ASSETS						
1 Tangible fixed assets	£m	3	1619.770	1713.802	1822.992	1907.525
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	0.106
4 Total fixed assets	£m	3	1619.876	1713.908	1823.098	1907.631
B CURRENT ASSETS						
5 Stocks	£m	3	1.864	1.863	2.177	2.379
6 Debtors	£m	3	40.885	28.797	33.783	28.824
7 Cash	£m	3	0.349	-3.272	-2.340	9.102
8 Short term deposits	£m	3	10.000	15.000	0.000	5.300
9 Infrastructure renewals prepayment	£m	3	1.452	0.000	2.734	3.341
10 Total current assets	£m	3	54.550	42.388	36.354	48.946
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	0.000	-3.044	0.000	0.000
13 Creditors	£m	3	-136.701	-113.610	-120.598	-118.022
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	-136.701	-116.654	-120.598	-118.022
19 Net current assets	£m	3	-82.151	-74.266	-84.244	-69.076
D CREDITORS: AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR						
20 Borrowings	£m	3	-627.560	-737.560	-807.560	-882.560
21 Other creditors	£m	3	-106.137	-102.624	-98.978	-96.187
22 Total creditors	£m	3	-733.697	-840.184	-906.538	-978.747
E PROVISION FOR LIABILITIES AND CHARGES						
23 Deferred tax provision	£m	3	-42.713	-144.282	-162.493	-187.416
24 Deferred income - grants and contributions	£m	3	-15.730	-17.723	-18.657	-19.456
25 Post employment asset / (liabilities)	£m	3	2.286	4.586	7.253	-4.123
26 Other provisions	£m	3	-32.884	-19.349	-20.679	-9.589
F PREFERENCE SHARE CAPITAL						
27 Preference share capital	£m	3	0.000	0.000	0.000	0.000
28 Net assets employed	£m	3	714.987	622.690	637.740	639.224
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	43.297	-49.000	-33.950	-32.466
32 Other reserves	£m	3	171.690	171.690	171.690	171.690
33 Capital and reserves	£m	3	714.987	622.690	637.740	639.224

Table 19 – HC Balance Sheet as at 31 March 2013

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 £13.019m (post dividend).

The P&L reserves in the Balance Sheet increased by £1.484m and this movement can be shown as follows:

Retained profit for the year	£13.019m
Pension scheme actuarial loss net of deferred tax	(£11.535m)

Movement in P&L Account **£ 1.484m**

The company has adopted International Financial Reporting Standards (IFRS) in its statutory accounts for the year end 31st March 2013. 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	115.090 *	12.465	2.716	130.271
Acc. Deprec	(15.250)	-	-	(15.250)
NBV	99.840	12.465	2.716	115.021

* 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	2.422	-	-	-	2.422
Accruals	2.980	18.335	0.440	-	21.755
Total	5.402	18.335	0.440	-	24.177

Line 21 - Other creditors falling due after more than one year

	Alpha
	£m
Lease obligation due > 1 yr	95.111

Line 26 - Other provisions

	Omega
	£m
Provisions	7.053

Significant features and movements**Fixed Assets**

Increase of £85m in line with in year additions of approximately £214.0m, capital contributions of £52.4m, depreciation of £75.6m and other movements.

Debtors

Decreased by £4.959m from £33.783m to £28.824m (14.7%). This is primarily due to:

- Measured, unmeasured and TE debtors decreased by £2.6m
- Accrued income from measured and TE customers decreased by £1.6m.
- Rechargeable debtors decreased by £1.8m.
- VAT receivable debtors increased by £0.6m.
- Measured, unmeasured and TE bad debt provision decreased by £0.7m.
- Rechargeables bad debt provision decreased by £0.3m.
- Prepayments decreased by £0.2m.
- Miscellaneous debtors decreased by £0.2m

Cash and Short term deposits

Cash has increased by £11.442m from (£2.340m) to £9.102m (489.0%) and Short term deposits have increased by £5.300m from nil to £5.300m (100.0%).

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	£155m
Net Interest paid	£ 54m
Dividend paid	£ 27m
PPP Lease payments	£ 4m
Total	£240m

Funded by:

Generated from operations	£181m
Loans	£ 75m
Increase of cash	(£ 11m)
Increase in deposit monies	(£ 5m)
Total	£ 240m

Deferred tax

The deferred tax balance has increased from £162.493m to £187.416m. An explanation for this has been included in the commentary to Table 18.

Borrowings > 1 year

Borrowings have increased by £75m from £807.56m to £882.56m. The additions to capital expenditure during the year were £214.0m. 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 asset of £7.252m became a Pension liability of £4.123m (a change in value of 156.9%).

This can be shown as follows:

	£m
Opening balance at 1.4.12	7.252
Current Service Costs	(10.161)
Past Service Costs	(1.639)
Contributions	10.909
Finance Credit	0.849
Actuarial Loss	(15.005)
Decrease in Deferred tax on liability	3.522
Curtailment in respect of cessation contribution from Northgate	0.150
Closing balance 31.3.13	(4.123)

Other provisions

Decreased from £20.679m to £9.589m (53.6%).

This decrease of £11.09m can be summarised as follows:

Decrease in Public and Employer Liability claims	(0.91m)
Decrease in Contractor claims (opex and capex)	(10.12m)
Decrease in early retirement provision	(0.06m)
Total	11.09m

**PPP – Infrastructure renewals charge (IRC) and expenditure (IRE)
– Capital Maintenance**

The table below summarises the IRC, IRE and capital maintenance during 2012/13 in relation to the PPP projects:

	Alpha	Omega	Kinnegar	Total
	£m	£m	£m	£m
IRE	-	-	-	-
IRC	-	-	-	-
Capital maintenance	0.490	-	-	0.490

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 2012-13 this is confirmed by the operator to be £490k. 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 2012-13 (2011-12: nil). There has therefore been no apportionment of IRC in 2012-13 (2011-12: 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 DESCRIPTION	2	3	4	5	6	7	8	9
		YEARS TO MATURITY years 0dp	PRINCIPAL SUM £m 3dp	Years to maturity x principle sum £m 3dp	REAL COUPON % 2dp	NOMINAL INTEREST RATE % 2dp	FULL YEAR EQUIVALENT NOMINAL INTEREST COST £m 3dp	FULL YEAR EQUIVALENT REAL CASH INTEREST PAYMENT £m 3dp	CARRYING VALUE £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	Capital loan note issued under GBP £1.2802bn Fixed Coupon Unsecured Loan Note instrument 2027	14	882.560	12355.840	1.97%	5.25%	46.334	46.334	882.560
350									
C2	Floating rate instruments								
351									
400									
C3	Index linked instruments								
401									
450									
	TOTAL FOR OTHER BORROWINGS		882.560	12355.840	1.97%	5.25%	46.334	46.334	882.560
D	TOTALS		882.560	12355.840			46.334	46.334	882.560
E	RPI assumption		3.28%						
F	ANALYSIS								
F1	INDICATIVE INTEREST RATES								
F1	Nominal interest		5.25%						
F2	Cash interest		5.25%						
G	INDICATIVE DEBT PORTFOLIO BREAKDOWN								
G1	Floating rate debt as percentage of total debt								
G2	Fixed rate debt as percentage of total debt			100%					
G3	Index linked debt as percentage of total debt								
G4	Fixed rate debt and index linked debt as percentage of total debt			100%					
G5	Weighted average years to maturity			14					

Table 19a – Analysis of Borrowings due after more than One Year

At 31 March 2013 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 2014. 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. At 28 March 2013 (note 29 March 2013 to 31 March 2013 were non-business days for gilt trading) the gilt reference rate was 2.3903% (30 March 2012: 2.8328% (note: 31 March 2012 was a non-business day for gilt trading)) equating to an equivalent borrowing rate of 3.2403% (30 March 2012: 3.6828%).

In 2010/11 NIW sought agreement from DRD Shareholder Unit to fix the interest rate for borrowings on the capital loan note issued after 1 April 2010 at the interest rate of 5.25% which applies to the previous borrowings. DRD are currently considering this proposal. As interest was accrued in the 2012/13 financial statements based on the fixed interest rate of 5.25% all loan note borrowings have been included in table 19a at the fixed rate of interest of 5.25%. Had the individual interest rates been used for each loan note the Nominal interest rate and the cash interest rate would have been 4.93% (31 March 2012: 5.09%).

In 2012/13 Capital loan notes were accounted for as held to maturity borrowings.

In addition to the capital loan note instrument NIW has committed facilities available in a £20m overdraft facility and a £55m Revolving Credit facility. These facilities were not utilised at 31 March 2013.

The **Overdraft facility**, for £20m, provides financing for working capital requirements of NIW. This is available until 31 March 2014 at a cost of Libor + 0.35%.

The **Revolving credit facility (RCF)** was established to finance unanticipated costs incurred by NIW.

The facility is split into two tranches:

- Facility A which provides finance for costs classed as notifiable to the Regulator and recoverable from users, on which interest is charged at Market rate Libor + 0.35%; and
- Facility B which provides finance for costs classed as unrecoverable from users, on which interest is charged at Market rate LIBOR +2.0%.

This facility is available until 31 March 2014, increasing from a commitment of £34m in 2007/08 to £55m for 2008/09 to 2013/14.

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
				2009-10	2010-11	2011-12	2012-13
DESCRIPTION		UNITS	DP				
1	Turnover	£m	3	347.569	345.740	354.819	366.398
2	Current cost operating costs (including CCD & IRC)	£m	3	-328.924	-341.824	-355.177	-349.470
3	Operating income	£m	3	0.005	0.079	-0.285	0.303
4	Working capital adjustment	£m	3	4.313	4.898	2.824	2.641
5	Current cost operating profit	£m	3	22.963	8.893	2.181	19.872
6	Other income	£m	3	0.000	0.000	0.000	0.000
7	Net interest receivable less payable	£m	3	-37.716	-47.520	-50.468	-55.067
8	Financing adjustment	£m	3	25.217	40.427	30.450	30.464
9	Current cost profit before taxation	£m	3	10.464	1.800	-17.837	-4.731
10	Current tax	£m	3	0.000	0.000	0.000	0.000
11	Deferred tax	£m	3	-14.273	-31.433	-18.472	-24.872
12	Current cost profit on ordinary activities	£m	3	-3.809	-29.633	-36.309	-29.603
13	Extraordinary items	£m	3	0.000	0.000	0.000	0.000
14	Current cost profit attributable to shareholders	£m	3	-3.809	-29.633	-36.309	-29.603
15	Dividends	£m	3	-34.537	-35.570	-25.604	-26.587
16	Current cost profit retained	£m	3	-38.346	-65.203	-61.913	-56.190

Table 20 – CC Profit and Loss account for year ending 31 March 2013

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	17.923*	0.000	(3.675)	(0.490)	4.007	17.765*
Omega	27.689	(3.053)	0.000	0.000	0.000	24.636
Kinnegar	2.102	(0.250)	0.000	0.000	0.000	1.852
Total	47.714	(3.303)	(3.675)	(0.490)	4.007	44.253

* includes lease interest of £11.913m.

Line 7 Net interest receivable less payable includes £11.913m interest payable on Alpha PPP finance lease.

Comparison with prior year results

	2012-2013	2011-2012	Variance
	£m	£m	%
Turnover	366.398	354.819	3.3%
CC Operating profit	19.872	2.181	811.1%
CC (loss) attributable to shareholders	(29.603)	(36.309)	(18.5)%
Dividends	(26.587)	(25.604)	3.8%
CC loss retained	(56.190)	(61.913)	(9.2)%

Sales have increased in 2013 by £11.579m (3.3%) due to:

- Increase in unmeasured household income £11.800m
 - Increase in unmeasured non-household income £ 0.099m
 - Decrease in measured non-household income (£ 2.044m)
 - Increase in trade effluent income £ 0.783m
 - Increase in road drainage income £ 0.777m
 - Increase in large user income £ 0.210m
 - Decrease in other income (£ 0.046m)
- Total increase £11.579m**

(see Table 23 for detail on water and sewerage income changes)

Operating costs have fallen by £5.7m (1.6%) over the same period and the overall impact is that the CC operating profit margin has risen from 0.6% to 5.4%. As in previous years the overall focus on cost reduction throughout the business has continued during 2012-13 although operating costs before taking account of IRC, CCD and amortisation have risen by £1.0m from £171.3m to £172.3m (0.6%).

However the fall in CCD of £6.9m (from £157.8m to £150.9m) has led to an overall rise in the operating margin. Some of the main changes in operating costs in 2013 include:

- Power costs have risen by £2.6m (8.2%).
- Employment costs have fallen by £0.3m (1.2%)
- Rates costs have risen by £1.0m (7.6%)
- General and support costs have fallen by £5.7m (15.2%)
- Hired and contracted costs have fallen by £1.3m (6.8%).
- Doubtful debts have risen by £0.5m (302.2%)
- CCD has fallen by £6.9m (4.4%).

The loss attributable to shareholders has decreased by approximately £6.706m due mostly to:

- Sales increased by £11.6m with operating costs down by £5.7m.
- Working capital and financing adjustments decreased by £0.2m (remain credit items).
- Profit /loss on disposal increased by £0.6m (loss to a profit).
- Net interest payable up by £4.6m.
- Deferred tax increase by £6.4m.

There was a dividend declared and approved for 2011/12 of £26.966m (accounted for in 2012-13) with £26.587m attributed to appointed activities.

Cost components in Operating Costs

The following cost components of Line 2 (£m) exceed £5m in 2012-13:

Wages and Salaries	39.109m*
Other pension costs	9.464m*
Electricity	34.328m*
Rates	14.451m*
Contractors	18.820m*
Out sourced billing	6.013m
PPP Operating Charges –Omega	24.636m
IRC	30.761m
Current cost depreciation	150.895m
Total	328.477m

(94.0% of total Operating Costs)

* includes an amount relating to unappointed activities that cannot be extracted out for the summary above.

Voluntary Early Retirement and Pension

The VER schemes in 2008/09, 2009/10, 2010/11, 2011/12 and 2012/13 can be summarised as follows:

	2012-13	2011-12	2010-11	2009-10	2008-09
Number	18* ^	11*	8*	34	89
Non pension element	£0.169m	£0.130m	£0.136m	£0.409m	£0.770m
Pension element	£1.639m	£0.695m	£1.073m	£3.207m	£6.773m
Total	£1.808m	£0.825m	£1.209m	£3.616m	£7.543m

* including 5 ill health retirees (2011/12- 2).

^ including 1 individual from 2011-12 scheme.

The above figures are for VER only and do not include the impact of the Voluntary Severance (VS) schemes in each of the years from 2008/09 to 2012/13.

The future schemes are still being finalised.

The total costs, payments and accruals for VER are as follows:

	2012-13	2011-12	2010-11	2009-10	2008-09
Total Cost	£1.808m	£0.825m	£1.209m	£3.616m	£7.543m
Payments in year	£0.039m	£0.092m	nil	nil	£0.234m
Accrual at year end due to employees	£0.130m	£0.130m	£0.136m	£0.409m	£0.536m
Accrual at year end due to pension fund	£1.639m	£0.603m	£1.073m	£3.207m	£6.773m

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	9.543							
Current Service Costs	(10.161)			3.248	6.913			10.161
Credit-Northgate*	0.150				(0.150)			(0.150)
Past Service Costs	(1.639)					1.639		1.639
Paid	10.909	(10.909)						
Net Finance income	0.849				(0.849)			(0.849)
Actuarial Loss	(15.005)		15.005					15.005
Closing Liability-pension	(5.354)							

* Northgate had been a participating employer in the NIW Pension Scheme. This arrangement ceased on 31st March 2012 when the contract with Northgate for outsourced services ended. Northgate were required to pay a cessation payment to the fund that is accounted for by NIW as a debit to the Pension Account and a credit to P&L Account.

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 2012/13 are as follows:

Dr 5140 Retirement movement in provision	£0.130m
Cr 2313 Accruals	£0.130m

(ignoring any opening accrual from 2011/12).

NIW Pension Fund

The Statutory Accounts at 31 March 2013 (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 2013 £000	Total year to 31 March 2012 £000
At the beginning of the year	130,195	113,342
Movement in year		
Expected return on assets	7,126	7,284
Contributions by plan participants	858	837
Contributions by employer	10,909	11,320
Actuarial gain/(loss)	7,649	458
Benefits paid	(2,501)	(2,628)
Settlement in relation to the Omega bulk transfer	-	(191)
Settlement in relation to adjustment to PCSPS bulk transfer	-	276
Settlement in relation to the admission of Northgate as a participating employer	1,402	(503)
Actuarial gain in respect of cessation contribution from Northgate	150	-
	155,788	130,195

Movement in present value of defined benefit obligations

	Total year to 31 March 2013	Total year to 31 March 2012
	£000	£000
At the beginning of the year	120,652	107,145
<i>Movement in year</i>		
Current service cost	10,161	10,310
Interest on scheme liabilities	6,277	6,128
Past service costs	1,639	695
Actuarial (gain)/loss	22,654	(1,417)
Contributions by plan participants	858	837
Benefits paid	(2,501)	(2,628)
Settlement in relation to the Omega bulk transfer	-	(191)
Settlement in relation to adjustment to PCSPS bulk transfer	-	276
Settlement in relation to the admission of Northgate as participating employer	-	(503)
Actuarial loss in respect of re- admission of Northgate employees	1,402	-
	161,142	120,652

Scheme assets and liabilities

	Total at 31 March 2013	Total at 31 March 2012
	£000	£000
Equities	44,271	60,488
Corporate bonds	28,579	24,443
Gilts	41,566	38,880
Other	33,795	6,384
Property	7,577	-
Total market value of assets	155,788	130,195
Actuarial value of liabilities	(161,142)	(120,652)
Surplus/ (deficit) in the scheme - pension asset / (liability)	(5,354)	9,543
Related deferred tax asset / (liability)	1,231	(2,291)
Net pension asset / (liability)	(4,123)	7,252

The year end pension liability as shown above before deferred tax is (£5.354m).

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	0.966
Other staff costs	(0.001)
Hired and contracted	(0.011)
Other costs of employment	0.013
Other expenses	0.005
Total	0.972

Reprofiling of costs may occur during the year as part of the quarterly reforecasting process.

Capitalisation of costs

During 2012/13 £11.187m of costs were capitalised from the profit and loss account. This can be broken down as follows:

Cost	£m
Staff Costs	9.388
Labour charge	0.010
Vehicles and plant	0.005
Overheads capitalised	1.784
Total	11.187

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	2	3	
			WATER RESOURCES & TREATMENT	WATER DISTRIBUTION	WATER SERVICE TOTAL	
SERVICE ANALYSIS - WATER						
A DIRECT COSTS						
1	Employment costs	£m	3	3.506	11.265	14.771
2	Power	£m	3	5.471	3.503	8.974
3	Agencies	£m	3	0.000	0.000	0.000
4	Hired and contracted services	£m	3	2.226	5.395	7.621
5	Associated companies	£m	3	0.000	0.000	0.000
6	Materials and consumables	£m	3	3.431	0.584	4.015
7	Service charges	£m	3	0.621	0.011	0.632
8	Bulk supply imports	£m	3	0.000	0.000	0.000
9	Other direct costs	£m	3	0.005	0.019	0.024
10	Total direct costs	£m	3	15.260	20.777	36.037
11	General and support expenditure	£m	3	7.761	7.557	15.318
12	Functional expenditure	£m	3	23.021	28.334	51.355
B OPERATING EXPENDITURE						
13	Customer services	£m	3			4.270
14	Scientific services	£m	3			1.289
15	Other business activities	£m	3			0.927
16	Total business activities	£m	3			6.486
17	Rates	£m	3			4.742
18	Doubtful debts	£m	3			0.327
19	Exceptional items	£m	3			0.000
20	Total opex less third party services	£m	3			62.910
21	Third party services - opex	£m	3			0.032
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	9.295	9.295
24	Reactive and planned maintenance non-infrastructure	£m	3	1.222	5.104	6.326
D CAPITAL MAINTENANCE						
25	Infrastructure renewals charge (excluding third party services)	£m	3	19.902	0.000	19.902
26	Current cost depreciation (allocated)	£m	3	61.580	18.333	79.913
27	Amortisation of deferred credits	£m	3			-1.807
28	Amortisation of intangible assets	£m	3			0.000
29	Business activities current cost depreciation (non-allocated)	£m	3			0.173
30	Capital maintenance excluding third party services	£m	3			98.181
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			98.181
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 - (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	5.692	0.000	5.692
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	0.077	0.000	0.077
8	Bulk supply imports	£m	3			
9	Other direct costs	£m	3	0.000	0.000	0.000
10	Total direct costs	£m	3	5.769	0.000	5.769
11	General and support expenditure (NIW Only)	£m	3	0.064	0.000	0.064
12	Functional expenditure	£m	3	5.833	0.000	5.833
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			3.108
18	Doubtful debts	£m	3			
19	Exceptional items	£m	3			
20	Total opex less third party services	£m	3			8.941
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	5.030	0.000	
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	4.007	0.000	4.007
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			4.007
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			4.007
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	3.506	11.265	14.771
2	Power	£m	3	11.163	3.503	14.666
3	Agencies	£m	3	0.000	0.000	0.000
4	Hired and contracted services	£m	3	2.226	5.395	7.621
5	Associated companies	£m	3	0.000	0.000	0.000
6	Materials and consumables	£m	3	3.431	0.584	4.015
7	Service charges	£m	3	0.698	0.011	0.709
8	Bulk supply imports	£m	3	0.000	0.000	0.000
9	Other direct costs	£m	3	0.005	0.019	0.024
10	Total direct costs	£m	3	21.029	20.777	41.806
11	General and support expenditure	£m	3	7.825	7.557	15.382
12	Functional expenditure	£m	3	28.854	28.334	57.188
B	OPERATING EXPENDITURE					
13	Customer services	£m	3			4.270
14	Scientific services	£m	3			1.289
15	Other business activities	£m	3			0.927
16	Total business activities	£m	3			6.486
17	Rates	£m	3			7.850
18	Doubtful debts	£m	3			0.327
19	Exceptional items	£m	3			0.000
20	Total opex less third party services	£m	3			71.851
21	Third party services - opex	£m	3			0.032
21a	PPP Unitary Charges (Opex element)	£m	3			
22	Total operating expenditure	£m	3			
22a	Payment by concessionaire to operator	£m	3	5.030	0.000	
C	REACTIVE AND PLANNED MAINTENANCE (INCLUDING OPEX)					
23	Reactive and planned maintenance infrastructure	£m	3	0.000	9.295	9.295
24	Reactive and planned maintenance non-infrastructure	£m	3	1.222	5.104	6.326
D	CAPITAL MAINTENANCE					
25	Infrastructure renewals charge (excluding third party services)	£m	3	19.902	0.000	19.902
26	Current cost depreciation (allocated)	£m	3	65.587	18.333	83.920
27	Amortisation of deferred credits	£m	3			-1.807
28	Amortisation of intangible assets	£m	3			0.000
29	Business activities current cost depreciation (non-allocated)	£m	3			0.173
30	Capital maintenance excluding third party services	£m	3			102.188
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			102.188
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	3.953	5.145	1.119	10.217
2	Power	£m	3	5.155	8.532	1.382	15.069
3	Agencies	£m	3	0.000	0.000	0.000	0.000
4	Hired and contracted services	£m	3	6.422	1.403	2.442	10.267
5	Associated companies	£m	3	0.000	0.000	0.000	0.000
6	Materials and consumables	£m	3	0.256	0.588	0.443	1.287
7	Service charges	£m	3	0.157	0.760	0.176	1.093
8	Other direct costs	£m	3	0.014	0.004	0.001	0.019
9	Total direct costs	£m	3	15.957	16.432	5.563	37.952
10	General and support expenditure	£m	3	7.433	6.989	2.051	16.473
11	Functional expenditure	£m	3	23.390	23.421	7.614	54.425
B OPERATING EXPENDITURE							
12	Customer services	£m	3				4.266
13	Scientific services	£m	3				1.223
14	Other business activities	£m	3				0.926
15	Total business activities	£m	3				6.415
16	Rates	£m	3				5.628
17	Doubtful debts	£m	3				0.037
18	Exceptional items	£m	3				0.000
19	Total opex less third party services	£m	3				66.505
20	Third party services - opex	£m	3				0.030
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	4.937	0.000	0.000	4.937
23	Reactive and planned maintenance non-infrastructure	£m	3	10.193	4.784	0.000	14.977
D CAPITAL MAINTENANCE							
24	Infrastructure renewals charge (excluding third party services)	£m	3	10.859		0.000	10.859
25	Current cost depreciation (allocated)	£m	3	3.311	61.123	2.338	66.772
26	Amortisation of deferred credits	£m	3				-2.706
27	Amortisation of intangible assets	£m	3				0.000
28	Business activities current cost depreciation (non-allocated)	£m	3				0.030
29	Capital maintenance excluding third party services	£m	3				74.955
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				74.955
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 (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		2.357	1.965	4.322
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				
9	Total direct costs	£m	3	0.000	2.357	1.965	4.332
10	General and support expenditure (NIW Only)	£m	3	0.000	0.167	0.049	0.216
11	Functional expenditure	£m	3	0.000	2.524	2.014	4.538
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				0.065
16	Rates	£m	3				0.973
17	Doubtful debts	£m	3				
18	Exceptional items	£m	3				
19	Total opex less third party services	£m	3				5.576
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	0.000	4.173	5.300	
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	3,953	5,145	1,119	10,217
2	Power	£m	3	5,155	10,889	3,347	19,391
3	Agencies	£m	3	0,000	0,000	0,000	0,000
4	Hired and contracted services	£m	3	6,422	1,403	2,442	10,267
5	Associated companies	£m	3	0,000	0,000	0,000	0,000
6	Materials and consumables	£m	3	0,256	0,588	0,443	1,287
7	Service charges	£m	3	0,157	0,760	0,176	1,093
8	Other direct costs	£m	3	0,014	0,004	0,001	0,019
9	Total direct costs	£m	3	15,957	18,789	7,528	42,274
10	General and support expenditure	£m	3	7,433	7,156	2,100	16,689
11	Functional expenditure	£m	3	23,390	25,945	9,628	58,963
B OPERATING EXPENDITURE							
12	Customer services	£m	3				4,266
13	Scientific services	£m	3				1,288
14	Other business activities	£m	3				0,926
15	Total business activities	£m	3				6,480
16	Rates	£m	3				6,601
17	Doubtful debts	£m	3				0,037
18	Exceptional items	£m	3				0,000
19	Total opex less third party services	£m	3				72,081
20	Third party services - opex	£m	3				0,030
20a	PPP Unitary Charges (Opex element)	£m	3				
21	Total operating expenditure	£m	3				
21a	Payment by concessionaire to operator	£m	3	0,000	4,173	5,300	
C REACTIVE AND PLANNED MAINTENANCE (INCLUDING OPEX)							
22	Reactive and planned maintenance infrastructure	£m	3	4,937	0,000	0,000	4,937
23	Reactive and planned maintenance non-infrastructure	£m	3	10,193	4,784	0,000	14,977
D CAPITAL MAINTENANCE							
24	Infrastructure renewals charge (excluding third party services)	£m	3	10,859		0,000	10,859
25	Current cost depreciation (allocated)	£m	3	3,311	61,123	2,338	66,772
26	Amortisation of deferred credits	£m	3				-2,706
27	Amortisation of intangible assets	£m	3				0,000
28	Business activities current cost depreciation (non-allocated)	£m	3				0,030
29	Capital maintenance excluding third party services	£m	3				74,955
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				74,955
33	Total operating costs	£m	3				

Tables 21 & 22 Activity Costing Analysis – Water & Sewerage Service

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 AIR13. 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 indirect 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 reduced significantly from AIR12 to AIR13 (by over £5M). This is explained in the General & Support section further on in the commentary. The table below shows the basis of apportionment of 'indirect' General & Support expenditure between service activities.

Allocation of General and Support	Water		Sewerage			Comments
	R&T	Distribution	Sewerage	Sewage Treatment	Sludge Treatment & Disp	
G&S Overhead Pot 1	24.7%	25.2%	19.2%	21.9%	8.9%	Non ops general spend. Excludes CS, SS & Regulation
G&S Overhead Pot 2a - Water	49.5%	50.5%	0.0%	0.0%	0.0%	Water related activities only
G&S Overhead Pot 2b - Sewerage	0.0%	0.0%	38.4%	43.8%	17.9%	Sewerage activities only
G&S Overhead Pot 3 SA 390	24.7%	25.2%	19.2%	21.9%	8.9%	Water and sewerage networks spend only
G&S Overhead Pot 3 M&E	25.0%	15.0%	35.0%	25.0%	0.0%	M&E Function spend only

The percentage splits in AIR13 allocate less costs to Water and more cost to Sewerage than AIR12. The allocation to Water from General & Support Overhead Pot 1, which contains circa 64% of the costs, has decreased from 51.9% in AIR12 to 49.9% in AIR13. This is due to the relative increase of direct costs in Sewerage as a percentage of total costs. This is primarily driven by an increase in Power costs, Employment costs and Hired and Contracted. 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 2012/13 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. Due to the relative changes in the direct costs as mentioned above, the allocation to Water has decreased from 51.9% in AIR12 to 50.0% in AIR13.

The table below shows the basis of apportionment for AIR13.

Apportionment of business activities	Water		Sewerage		
	R&T	Distribution	Sewerage	Sewage Treatment	Sludge Treatment & Disp
DESCRIPTION - Total spend (Includes general & Support)	24.5%	25.6%	19.1%	21.8%	9.0%
Apportionment					
Water / Sewerage split	50.0%		50.0%		

Rates were allocated between Table 21 and Table 22 using the rates bills. The rates charge for Water Treatment can be specifically identified from the rates bill. Admin properties are split based on the business activity apportionment in the table above. In AIR13 overall rates are split 54% Water and 46% Sewerage which was the same apportionment in AIR12.

Allocation of costs to unappointed activities

A final allocation of costs has been made to unappointed activities based on an assumption that these activities are either charged on a full cost recovery basis, and

thus costs broadly mirror income generated, or the income does not give rise to any additional operational costs (e.g. rents received or fishing rights). This is consistent with previous AIR returns.

Atypical costs and provisions:

Reorganisation costs

Reorganisation costs included within reported totals on Tables 21 and 22 are provided in the table below:

Description	Amount	Table 21/22 location
Business Improvement Programme	£1.0M	General & Support – all activities
Voluntary Early Retirement Scheme \ Voluntary Severance (VER \ VS)	£3.4M	Employment Costs and General & Support – all activities
Total	£4.4M	

Business Improvement Programme

The Business Improvement Programme (“BIP”) seeks to address four strategic strands:

- Improve services to Customers;
- Develop the NI Water people;
- Build a more efficient and effective organisation; and
- Exceed, where possible, quality compliance standards.

Total Opex on the BI Programme in AIR13 was £1.0M, compared to £1.5M in AIR12. Expenditure has decreased reflecting the fact that there was no Data Quality opex in the year; AIR12 had £0.7M of opex costs for the Data Quality programme.

Voluntary Early Retirement

During 2012/13 NI Water further reduced the workforce resulting in the release of Voluntary Early Retirement (VER) and Voluntary Severance (VS) schemes. Further details on the staff reduction programme is contained within the Annual Report.

The cost of £3.4M can be broken down as follows:

Description	Amount
Pension related VER past service costs	£1.6M
Non pension lump sum	£0.2M
VS scheme payments	£1.6M
Total	£3.4M

Of the above costs relating to the 2012/13 scheme, the only payments made during the year totalled less than £0.8M. 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 AIR12 was £2.9M.

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 £49M as detailed below. These costs include the £3.4M VER\VS costs outlined above. Only circa £25M is included in Employment Costs (Line 1) in Tables 21 & 22 (AIR12 circa £25M).

The table below provides the reconciliation between these amounts:

Description	Amount	Table 21/22 location
Industrial Wages	£18.6M	
Salaries	£24.8M	
Temporary Staff	£0.7M	
Other Costs of Employment	£3.6M	
Staff Expenses	£1.1M	
Total NI Water staff costs	£48.8M	
Less:		
Customer Services	(£3.9M)	Customer Services
Scientific Services	(£1.4M)	Scientific Services
Regulation	(£0.5M)	Other Business Activities
Unallocated	(£18.0M)	General & Support
Total Employment Costs	£25.0M	£14.8M Table 21 and £10.2M Table 22

The unallocated amount of circa £18M is included in General & Support and has been apportioned between Table 21 and 22, across each of the columns, based on total direct costs.

Total NI Water staff costs have decreased by approximately £3M from AIR12 due to a reduction in Industrial wages of £0.8M and Salaries of £3.0M which was offset by an increase in £0.2M in temporary support staff and £0.5M in other costs of employment. The reduction in Industrial Wages was due to a reduction in overtime paid (£0.6M). The main reduction in Salaries in AIR13 from AIR12 is primarily due to an increase in capitalised salaries.

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 AIR12 was circa £19M.

Hired & Contracted Services:	Table 21	Table 22	Total
Operational Contractors	£7.0M	£10.1M	£17.1M
Other Contractors	£0.6M	£0.2M	£0.8M
Consultants	£0.0M	£0.0M	£0.0M
TOTAL	£7.6M	£10.3M	£17.9M

Within the Operational Contractors costs of £7.0M 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. Within the Operational Contractors cost of £10.1M in Table 22, circa £2.4M is for the cost of the various Sludge Disposal Routes, circa £6.3M is for the maintenance of the Sewerage network and the balance relates to the costs of Sewage Treatment (including the costs of Skip Hire etc.).

There is a very minor element of Consultants Fees within Hired and Contracted within Table 21 (<£0.1M).

Hired and Contracted Services have decreased by £1.3M from AIR12. In Table 21 Operational Contractors costs have decreased by £0.7M while in Table 22 Operational Contractors costs have also decreased by £0.6M. The main reduction in Table 21 is under Water Distribution which has reduced by £0.5M. AIR13 Operational Contractor costs in Table 22 are down across all three columns.

General & Support Costs

General & Support costs have reduced substantially from AIR12 (£37.8M) to AIR13 (£32.1M).

The principal costs in this expenditure line are:

Description	Amount	Table 21/22 location
Unallocated Employment Costs	£18.0M	Included in General & Support (Removed from Employment Costs)
Unallocated Power	£0.3M	Included in General & Support (Removed from Power Costs)
Unallocated Hired & Contracted Costs	£5.9M	Included in General & Support (Removed from Hired & Contracted)
Unallocated Materials & Consumables	£1.2M	Included in General & Support (Removed from Materials & Consumables)
Unallocated Other Direct Costs	£3.1M	Included in General & Support (Removed from Other Direct Costs)
Communication	£1.1M	General & Support
Mobile V&P Charges & Repairs	£2.2M	General & Support
Other	£0.3M	General & Support
Total	£32.1M	£15.4M Table 21 and £16.7M 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 was consistently applied to both AIR12 and AIR13. See the **Allocation of costs between service areas** section at the start of the commentary.

One of the main reasons for the decrease is that in AIR13 Environmental Regulator costs are now separately reported in Line 7 Service Costs and not included in Line 11 General and Support. This has removed £1.8M from General and Support costs for AIR13. The main decreases from AIR 12 are in Unallocated Employment Costs (£2.5M reduction), Unallocated Other Direct Costs (£0.6M reduction) and Unallocated Hired & Contracted Costs (£0.4M reduction).

Table 21 – Water Service (PPP only)

Line 2 - Power Costs

[Redacted]

Line 7 - Service Charges

This line includes the costs of abstraction licences at each of the PPP Alpha sites.

Line 11 - General & Support Expenditure

General and support expenditure has been calculated on the same basis as in AIR12. [Redacted]

[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 remained relatively static between AIR12 and AIR13.

Line 21a - PPP Unitary Charges (Opex)

This line data is drawn directly from the Company's accounts. No additional reconciliation is required. [Redacted]

[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]

Further details on each of these is given in the commentary to table 42 line 10. [Redacted]

[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]

Line 22a - 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 21 – Water Service - Total

A - Direct Costs

Table 21 Total Functional Expenditure has decreased by circa £4.6M from AIR12 to AIR13. This is primarily due to the decrease in the allocation of General & Support expenditure (£4.2M) and some other minor variances which are explained on a line by line basis below;

- Line 1: Employment costs have decreased in Water Resources & Treatment (WRT) by circa £0.4M and in Water Distribution (WD) by circa £0.5M. The decrease in WRT is primarily due to a decrease in VER costs whilst the decrease in WD is primarily due to a decrease in overtime costs.
- Line 2: Power costs include electricity costs, fuel costs for power generation and costs for the CRC Energy Efficiency Scheme. Overall the costs have increased by circa £0.6M in AIR13 from AIR12 due to increased energy tariffs. Power costs include £5.7M related to PPP.
- Line 3: Agencies – there are no costs in this line.
- Line 4: Hired and Contracted Services have decreased by circa £0.7M, with the majority of the decrease in WD.
- Line 5: Associated companies – there are no costs in this line.
- Line 6: Materials & Consumables have reduced by circa £0.1M from AIR12.
- Line 7: Service Charges – the costs are £0.7M with the majority of the costs in WRT for abstraction licences. As mentioned above these costs were previously included in General & Support expenditure. Service Charges include circa £0.1M for PPP.
- Line 8: Bulk Supply imports – there are no costs in this line.
- Line 9: Other Direct Costs are immaterial and in line with AIR12.
- Line 10: Total Direct Costs – this is a calculated line and is the total of Line 1-9. AIR13 direct costs are £0.4M lower than AIR12. This is driven by the reduction in Employment Costs and Hired & Contracted Services which have been off-set by the increase in Power costs and the inclusion of the Service Charges as detailed above.
- Line 11: General & Support expenditure has reduced by circa £4.2M from AIR12 to AIR13 (£1.5M in WRT and £2.7M in WD). The reason for the decrease in the costs in Table 21 is the decrease in the overall General & Support expenditure (as already discussed), combined with the reduction in the percentages used to allocate General & Support costs to Table 21. The percentages used are calculated on the total of Direct Costs and in AIR13 the total of the Direct Costs of Table 21 have reduced by circa £0.4M whilst the Direct Costs for Table 22 have increased by circa £3M. This results in a decreased allocation in Table 21 of 50.0% (51.9% in AIR12). 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 £0.1M for PPP.
- Line 12: This is the calculated total line for functional expenditure which has decreased by circa £4.6M mainly due to the £4.2M decrease in General & Support expenditure. Line 12 includes £5.8M of costs associated with PPP (AIR12 £5.5M).

B - Operating Expenditure

- Line 13: Customer Services costs have decreased by circa £0.3M compared to AIR12 in Table 21. This is primarily due to a decrease in total Customer Services in Salaries (£0.4M). Customer Services costs are apportioned based on the percentage of direct costs from Table 21 & 22. In AIR13 the percentage split was

calculated at 50.0% Table 21 and 50.0% Table 22. In AIR12 the percentage split was 51.9% and 48.1% between Table 21 & 22 respectively.

- Line 14: Scientific Services costs have decreased marginally from AIR12. 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 decreased from AIR12 marginally. 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 decrease from AIR12 of circa £0.5M is driven by the decrease in Customer Services costs as detailed above.
- Line 17: Local authority rates have increased in AIR13 from £7.3M in AIR12 to £7.9M in AIR13 and agree with the rates bills from LPS (Land & Property Services). The rates charge for Water treatment can be specifically identified from the rates bill. Rates include circa £3.1M relating to PPP sites.
- Line 18: Doubtful debts have increased from the AIR12 position of £0.1M to £0.3M in AIR13.

The increase in doubtful debts is due to:

1. In AIR12, the bad debt provision was calculated on a reduced debtor base, on the assumption that a proportion of the debt would be eliminated through credit notes thereby impacting upon income, rather than written off as a bad debt. This led to a one-off £1.0M decrease in the bad debt charge in AIR12.
2. During the year the percentages used to calculate the bad debt provision were reviewed and reduced. Hence, the bad debt provision dropped by approximately £0.3M in AIR13.
3. During the year, £0.3M was received from a debtor for a debt that had been previously provided for in full.

The total NI Water doubtful debts have then been split between Table 21 and 22 on a specific line by line basis (consistent with AIR12). This results in a £0.2M increase in Table 21 and a £0.3M increase in T22.

- 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 £4.2M from AIR12 driven by the decreases in General and Support costs.
- Line 21: Third party services are immaterial.
- Line 21a: Total PPP Unitary Charge has [REDACTED] 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 [REDACTED]
- Total operating expenditure includes circa [REDACTED] relating to PPP (AIR12 £10.7M).
- Line 22a: This figure has [REDACTED] from AIR12 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 £0.6M from AIR12.
- Line 24: Non-infrastructure, this figure has reduced by circa £0.5M from AIR12.

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 [REDACTED]. 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 unitary charge is thus accounted for in the following components:

- In 2012/13 the net charge to the profit and loss account in respect of the service element of the Alpha unitary payments was [REDACTED] (2011/12 [REDACTED]).
- In 2012/13 the charge to the profit and loss account in respect of the finance charge element of the Alpha unitary payments was [REDACTED] (2011/12 [REDACTED]M).
- In 2012/13 an amount of [REDACTED] (2011/12 [REDACTED]) 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 2012/13 an amount of [REDACTED] (2011/12 [REDACTED]) 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 [REDACTED] (2011/12 [REDACTED]).

Leakage costs

Operating costs relating to leakage have increased marginally from £5.3M in AIR12 to £5.4M in AIR13. Capital expenditure has remained consistent from AIR12 to AIR13.

Table 22 - Sewerage Service (PPP only)

Line 2 - Power Costs

Power costs have increased from AIR12 as a result of increased energy tariffs and consumption.

Costs for Duncrue and a 35% allocation of the Ballynacor site costs have been included in column 3 as sludge treatment and disposal costs. (The Ballynacor site does not have a sub-meter to allow exact apportionment of WWTW and Sludge plants for the whole period).

Kinnegar: Power costs are not recorded as [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 AIR12 reflecting all costs associated with P101 cost centre. [REDACTED]

[REDACTED]

Total general and support costs associated with the Omega contract were calculated

[REDACTED]

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 AIR12.

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 AIR13 is 2.2%.

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]

[REDACTED]

The Omega charge of [REDACTED] reflects unitary charge invoiced and accrued of

[REDACTED] as follows:

[REDACTED]

[REDACTED]

Further details on all of these atypical amounts are given in the commentary to line 10 of table 42.

The charge on this line has [REDACTED] from AIR12. This movement can be summarised as follows:

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

Line 21a - Payments from Concessionaire to Operators

Column 2: Payments to Operators for Sewage Treatment 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.

Column 3: This year's figure represents a full year's payment to the Operator for Sludge Disposal Services only.

Table 22 - Sewerage Service - Total

A - Direct Costs

Total Functional Expenditure in Table 22 has increased by circa £1.6M from AIR12 to AIR13. This is primarily due to an increase in Power and is explained on a line by line basis below:

- Line 1: Employment costs have increased in Sewerage by circa £0.4M, in Sewage Treatment by circa £0.3M and decreased marginally in Sludge Treatment & Disposal from AIR12. The increase is primarily due to an increase in VER costs.
- 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 increased by £2.0M in AIR13 from AIR12 due to increased energy tariffs.

In AIR13 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 AIR12.

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 42:58 split between the Belfast WWTWs and the Incinerators which has been used to calculate the amount relating to Sewage Treatment at Belfast and Sludge Treatment at the Incinerators. The method of allocation is the same as AIR12 (based on an estimated KWhr usage at each of the sites). In 2012/13 the estimated split was 36:64.



- Line 3: Agencies – there are no costs in this line.
- Line 4: Hired and Contracted have decreased by £0.6M, with £0.1M in Sewerage, £0.3M in Sewage Treatment and £0.2M in Sludge Treatment & Disposal.
- Line 5: Associated companies– there are no costs in this line.
- Line 6: Materials & Consumables have increased marginally by £0.1M from AIR12 to AIR13.
- Line 7: Service Charges – the costs are £1.1M split between Sewerage £0.2M, Sewage Treatment £0.8M and Sludge Treatment & Disposal £0.2M. As mentioned above these costs were previously included in General & Support expenditure. 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. AIR13 direct costs are £3.1M higher than AIR12. This is driven by Power and Service Charges as detailed above.
- Line 10: General & Support expenditure has reduced by circa £1.5M from AIR12 to AIR13. There has been an increase of £0.6M in Sewerage which has been offset by reductions of £0.8M in Sewage Treatment and £1.3M in Sludge Treatment & Disposal. Overall General and Support costs have reduced significantly in AIR13 (as already discussed). The percentages used to allocate General & Support expenditure for Table 22 has increased from 48.1% in AIR12 to 50.0% in AIR13. 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. [REDACTED]

- Line 11: This is the calculated total line for Functional Expenditure which has increased by £1.6M. This increase is driven by the £2.0M increase in Power costs as discussed above. [REDACTED]

B - Operating Expenditure

- Line 12: Customer Services costs have increased marginally compared to AIR12. Overall the costs of Customer Services have decreased and the slight increase in Table 22 is due to the increase in the percentage split used to apportion Customer Services costs between Table 21 & 22. The costs are apportioned based on the percentage of direct costs from Table 21 & 22. In AIR13 the percentage split was calculated at 50.0% Table 21 and 50.0% Table 22. In AIR12 the percentage split was 51.9% and 48.1% between Table 21 & 22 respectively.
- Line 13: Scientific Services costs have decreased marginally from AIR12. 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 remained constant from AIR12. 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 is a minimal increase from AIR12.
- Line 16: Local authority rates have increased by circa £0.4M from AIR12. [REDACTED]
- Line 17: Doubtful debts have increased from the AIR12 position of a credit of circa £0.3M to circa £0.0M.

The increase in doubtful debts is due to:

1. In AIR12, the bad debt provision was calculated on a reduced debtor base, on the assumption that a proportion of the debt would be eliminated through credit notes thereby impacting upon income, rather than written off as a bad debt. This led to a one-off £1.0M decrease in the bad debt charge in AIR12.
2. During the year the percentages used to calculate the bad debt provision were reviewed and reduced. Hence, the bad debt provision dropped by approximately £0.3M in AIR13.
3. During the year, £0.3M was received from a debtor for a debt that had been previously provided for in full.

The total NI Water doubtful debts have then been split between Table 21 and 22 on a specific line by line basis (consistent with AIR12). This results in a £0.2M increase in Table 21 and a £0.3M 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. [REDACTED]
- Line 20: Third party services are immaterial.
- Line 20a: Total PPP Unitary Charge has [REDACTED] 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 [REDACTED] from AIR12. This is driven by the [REDACTED]

Total operating expenditure includes [REDACTED]

- Line 21a: Payments to Operators for Sewerage Services has [REDACTED] to [REDACTED] in AIR13.

C - Reactive & Planned Maintenance

- Line 22: Infrastructure, this figure has [REDACTED] from AIR12 to [REDACTED].
- Line 23: Non-infrastructure, this figure has [REDACTED] from AIR12 [REDACTED]

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 2012/13 the charge to the Operating Costs Statement in respect of Kinnegar was £1.9M (2011/12 [REDACTED]). The gross charge was [REDACTED] (2010/11 [REDACTED]) with [REDACTED] (2011/12 [REDACTED]) [REDACTED]

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, [REDACTED] [REDACTED] In 2012/13 the charge to the Operating Costs Statement in respect of Omega was [REDACTED] (2011/12 [REDACTED]). The gross charge was [REDACTED] (2011/12 [REDACTED]) [REDACTED]

Reactive and planned maintenance

The overall approach and allocation process for Tables 21 and 22 has remained consistent with AIR12. 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 2013 were £10.8M (AIR12 £9.8M) which amounts to £11.7M net of interest credit (AIR12 £11.0M) and these were charged to the profit and loss account. This is made up of current service costs of £10.2M (AIR12 £10.3M), past service costs of £1.6M (AIR12 £0.7M) offset by a credit of £0.1M (AIR12 £NIL) relating to a cessation contribution to the pension fund from Northgate when it ceased to be a participating employer in the fund at the termination of the contract with NIW. 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 £10.9M (AIR12 £11.3M) including £0.8M relating to payment of 2011/12 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 2013 has moved from an asset to a liability position for the first time since the inception of the scheme on 1st April 2007. There have been no contributions relating to funding this deficit position.

Further disclosures on pensions are contained in the statutory accounts which are based on the company's actuarial report at 31 March 2013.

Third party costs

Third party costs remain negligible in AIR13 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.

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)	
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 2012/13 year-end position of income against budget was as follows:

Income	Actual Income 2012/13 £m	Budget Income 2012/13 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	121.2	121.2	0.0
Domestic phasing subsidy - sewerage	143.9	143.9	0.0
Non-domestic phasing subsidy - water	1.2	1.2	0.0
Non-domestic phasing subsidy - sewerage	1.4	1.4	0.0
Domestic allowance - water	7.9	8.2	(0.3)
Domestic allowance - sewerage	4.0	3.9	0.1
Septic tank subsidy	2.1	2.0	0.1
Total subsidy	281.7	281.8	(0.1)
Non-domestic income:			
Measured water	36.2	39.7	(3.5)
Measured sewerage	19.6	23.6	(4.0)
Unmeasured water	1.0	1.2	(0.2)
Unmeasured sewerage	1.3	1.3	0.0
Trade effluent	7.1	6.2	0.9
Total non domestic income	65.2	72.0	(6.8)
Road drainage income	20.9	20.9	0.0
Other	3.8	3.3	0.5
TOTAL INCOME	371.6	378.0	(6.4)

The above table includes both appointed and un-appointed income.

As can be seen, total income was £6.4m under budget for 2012/13, with the bulk of this (£7.5m) in measured water and measured sewerage. This has arisen because of the following:

- Various provisions against 2012/13 income amounting to £3.3m, covering mainly Hospital TE and ELB domestic allowances. The Hospital at £2.7m for measured sewerage (with a positive impact in TE – see below) was the major provision in the year. This arose when [REDACTED] queried why some of their measured sewerage income had not been billed as trade effluent. As trade effluent is billed at roughly half the measured sewerage tariff, any re-billing of hospitals from measured sewerage to trade effluent will have a negative impact on NI Water's income. Discussions are still on-going with the hospitals, but estimates were made of the total impact across all hospitals. This arrived at a potential net loss of £1.5m; hence the £2.7m provision in

measured sewerage, balanced by the £1.3m increase to trade effluent below (£0.1m has already hit the accounts as a loss in 2012/13).

- The budget was set based on consumption for the period Oct 2010 to Nov 2011. Since that time, there were reductions in consumption, mainly within the manufacturing industry. Furthermore, consumption for the Oct 2010 to Nov 2011 period was skewed by large water consumption arising from leakage caused by the freeze thaw incident in December 2010.
- Balancing all this was an increase in income of £1.8m, due to the release of pipe size, DCR and future system adjustment provisions. Furthermore, there was £0.7m of invoicing for "times 10" meters i.e. meters which were read incorrectly in previous years, a digit being missed out.
- Trade effluent was £0.9m greater than budget, mainly due to the £1.3m increase for hospital TE income, as mentioned above. The subsequent £0.4m reduction was caused by reduced weighted average strengths for some customers, as well as reduced consumption (related to water and sewerage above).

Movements in Income between 2012/13 and 2011/12

The table below details the income for the year ended 31 March, for both 2013 and 2012:

Income	Actual Income 2012/13 £m	Actual Income 2011/12 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	121.2	119.3	1.9
Domestic phasing subsidy - sewerage	143.9	134.0	9.9
Non-domestic phasing subsidy - water	1.2	1.2	0.0
Non-domestic phasing subsidy - sewerage	1.4	1.3	0.1
Domestic allowance - water	7.9	7.9	0.0
Domestic allowance - sewerage	4.0	3.6	0.4
Septic tank subsidy	2.1	1.9	0.2
Total subsidy	281.7	269.2	12.5
Non-domestic income:			
Measured water	36.2	38.4	(2.2)
Measured sewerage	19.6	20.2	(0.6)
Unmeasured water	1.0	1.1	(0.1)
Unmeasured sewerage	1.3	1.3	0.0
Trade effluent	7.1	5.8	1.3
Total non domestic income	65.2	66.8	(1.6)
Road drainage income	20.9	20.1	0.8
Other	3.8	3.7	0.1
TOTAL INCOME	371.6	359.8	11.8

The above table includes both appointed and un-appointed income.

The income has increased by £11.8m, due to:

- An increase in the subsidy of £12.6m, mainly within domestic sewerage where there was a 9.5% increase in the tariff.
- For non-domestic income, there were tariff increases for both measured water (3.4%) and measured sewerage, though been compensated by a £1.0m fall in the accrued income movement. However, as mentioned above in the analysis against budget, the 2012/13 year saw further reductions in consumption, notably in the manufacturing industry. The consumption fall was seen especially in water, where there was evidence of 2011/12 income being increased for freeze thaw leakage.
- Income in 2011/12 had £2.3m of provision releases; income for 2012/13 had £0.5m less of releases at £1.8m.
- Income for 2012/13 had the £1.5m loss from Hospital TE plus £0.3m for ELB domestic allowances, balanced by the £0.7m billing of x10 meters.

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 2013:

Measured and unmeasured income			
		£m	
Invoiced income		60.4	
System adjustments		0.2	
Billed income		60.6	
Movement in accrued income		(0.9)	
Hospital TE provision		(2.7)	
Release of future system adjustments provision		0.7	
Release of Pipe size provision		0.5	
Release of DCR provision		0.6	
Reduction in test meter accrual		(0.1)	
Provision for TE review and some MS customers		(0.2)	
Provision for ELB domestic allowances		(0.3)	
Total income per accounts		58.2	
Accrued income at 31 March 2013 (net of Hospital TE adjustment) represented 19% (2012: 22%) of annual billed income.			
Trade effluent			
		£m	
Invoiced income		6.0	
System adjustments		(0.1)	
Movement in accrued income		(0.1)	
Hospital TE provision		1.3	
Total income per accounts		7.1	
Accrued income at 31 March 2013 (net of Hospital TE adjustment) represented 10% (2012: 11%) of annual billed income.			

The two tables above show the Total income per accounts prior to the classification in the accounts of elements of total income to large user revenue.

Of the adjustments detailed above, the following are “one-off” adjustments in 2012/13, and are not expected to recur:

- Release of pipe size provision – the provision was reduced to zero as at 31 March 2013.
- Reduction in test meter accrual – the final test meter batch was issued in June 2012, thereby setting the accrual at zero.

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.
- Hospital TE provision – there will be movements in this provision during 2013/14, once further work has been done to clarify the assumptions to be used.
- Future system adjustments – there will always be the need to provide for estimated future system adjustments.
- Release of DCR provision – a provision is still being held in the accounts.
- Provision for TE review and some MS customers – there will be a movement in this when it is released in 2013/14.
- Provision for ELB domestic allowances – there will be a movement in this when it is released in 2013/14.

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.
- Work has started on reviewing the level of accrued income each month, across the 70,000 measured customers.

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 the 2012/13 year, Internal Audit carried out a review of the work done to satisfy the Management Letter Points raised by KPMG in its 2011/12 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 2013, together with a comparison to the balances as at 31 March 2012.

	Balance 2012/13 £m	Balance 2011/12 £m	Variance £m
Debtors (water and sewerage)	9.5	12.4	(2.9)
Debtors (trade effluent)	0.7	0.8	(0.1)
Bad debt provision	(4.5)	(5.2)	0.7
Bad debt provision (trade effluent)	(0.1)	(0.1)	0.0

The £3.0m 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 2012 included £2.9m of 2012/13 unmeasured annual billing, which was raised in March 2012; the unmeasured billing for 2013/14 was not carried out until April 2013.
- The gross debtors at 31 March 2013, aside from the 2012/13 unmeasured billing, had decreased by £0.2m from the previous year, despite the impact of £0.7m "x10 meter" debtors and £0.5m of debt raised in March 2013 for [REDACTED]. The reduction was due to improved collection and a £0.3m increased write-off.
- The debtors at 31 March 2012 included a reduction of £2.2m for future system adjustment charges; the figure was £1.5m at 31 March 2013.
- Credits on the debtor balance increased by £0.4m in 2012/13.

The £0.7m decrease in the bad debt provision reflects:

- The reduced level of debt at 31 March 2013, especially for debt greater than six months.
- Re-assessment of the provision level required.

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 2013 is shown in Appendix H.

The accrued income in the last two years has been:

	Accrued Income 2012/13 £m	Accrued Income 2011/12 £m	Variance £m
Accrued income:			
Measured water and sewerage	8.9	11.7	(2.8)
Trade effluent	1.9	0.7	1.2
TOTAL ACCRUED INCOME	10.8	12.4	(1.6)

This fall of £1.6m can be explained as follows:

- The income at 31 March 2013 was decreased for the £1.5m provision for hospital TE.
- Whilst there was a £1.1m release of DCR provision and pipe size provision, the accrued income in the DCR fell by £1.0m, partially because measured water was over-accrued at 31 March 2012, but also due to the timing of some billings e.g. Large Users.

- There was a reduction to accrued income at 31 March 2013 of £0.3m relating to anticipated domestic allowances to be claimed by the Education and Library Boards.

Subsidy Income

In 2012/13, NI Water had total subsidy income of £281.8m. This was broken down as follows:

- £265.1m for domestic phasing subsidy for water and sewerage, in lieu of domestic charges.
- £2.6m for non-domestic phasing subsidy, representing 50% of unmeasured non-domestic income.
- £12.0m for domestic allowance subsidy, representing the domestic allowance claimed by customers for both water and sewerage.
- £2.1m 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 2012/13 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 £20.9m was invoiced in 2012/13 to Roads Service, compared to £20.1 in 2011/12. 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

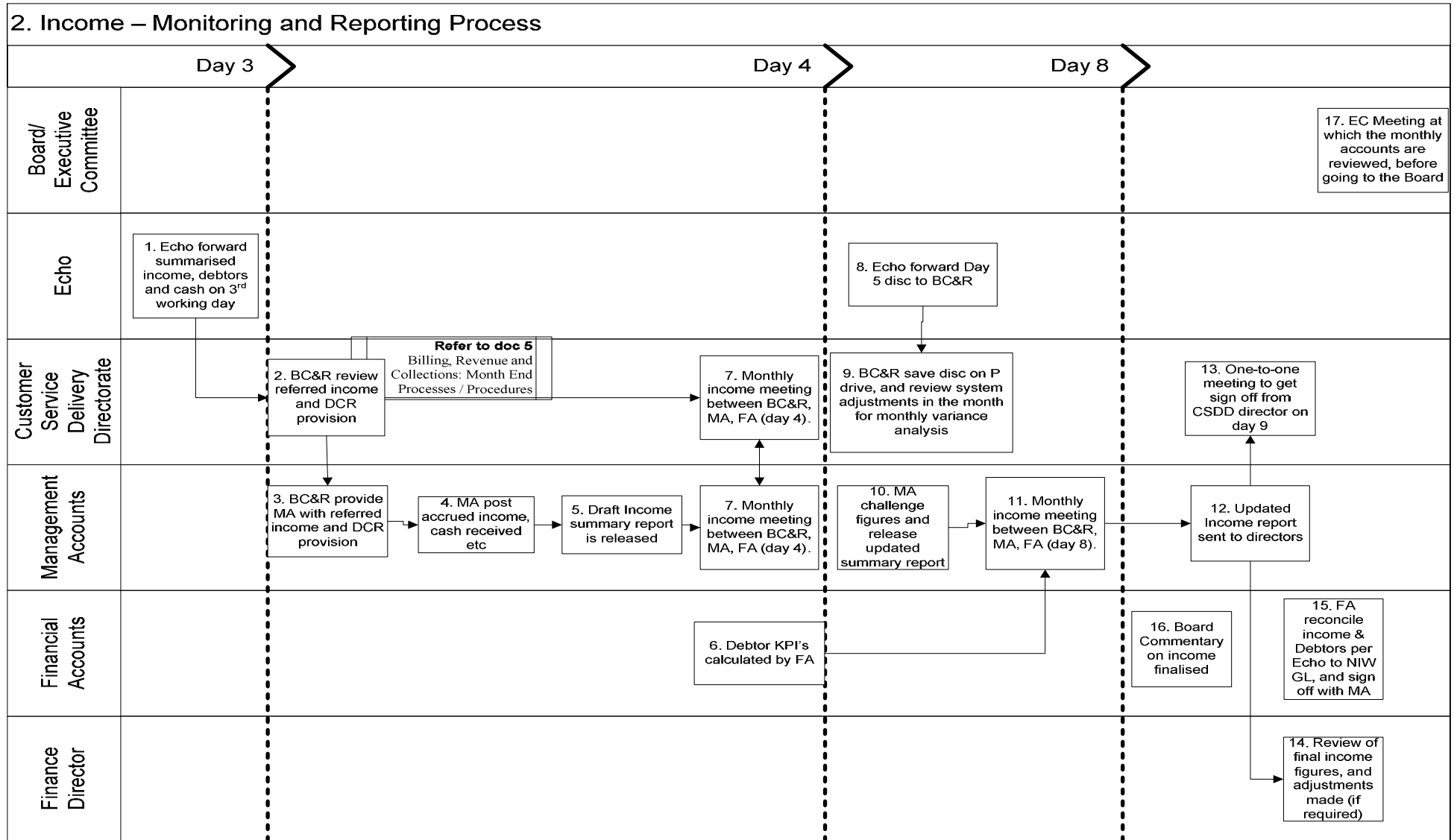
Non-tariff Basket Income

There is no net income movement out of the tariff basket for either water or sewerage.

Other Income

Other income was £3.7m for the 2012/13 year, against a budget of £3.3m, largely as a result of increased income 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_AccrualdetailMMM 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 2013

Extract for Elnape Summary

YTD income 1st Apr to end of Previous Month	31 Mar 13		Returned Income	Returned Income	Deferred Income	Deferred Income	Monthly Movement	C o/sing Balance	GL01 report	Diff	Vic Square reversal	Vic Square accrual	DCR provision movement reversal	DCR movement provision	Hospital TE Reversal	Hospital TE	Adj in accrued income reversal	Adj in accrued income	ELD dom allowance provision	Extra LUT accrued income	Refund adj in bank rec	TE review provision reversal	TE review provision	Prov against MS customers reversal	Prov against MS customers	Release x10 billing	P pe Size reduction	DCR provision release	Future sys-adj reduction	Diff					
	from Echo	Accrued Income																													Accrued Income	Reverse Previous	Reverse Previous	Reverse Previous	Reverse Previous
	Disc Dr/(Cr)	Reverse Previous Dr/(Cr)																													For th s month Dr/(Cr)	Reverse Previous Dr/(Cr)	For this month Dr/(Cr)	Reverse Previous Dr/(Cr)	For th s month Dr/(Cr)
4211 Measured Water	32 600 437	3 183 372	(7 806 510)	7 391 568	148 287	(127 128)	2 780 190	35 385 627	36 189 634	809 007	(70 000)	10 000	(117 730)	124 261	575 000	(2 719 230)	60 399	(57 367)	(186 000)	65 000	445	140 000	(140 000)	110 000	(70 000)	480 000	100 000	300 000	100 000	(1)					
4311 Measured Sewerage	19 577 548	2 654 426	(6 000 000)	5 275 511	113 792	(101 186)	1 527 310	21 505 160	19 623 296	(1 881 864)	(104 000)	15 000	(91 990)	86 539	575 000	(2 719 230)	86 145	(70 680)	(145 000)	50 000	361	140 000	(140 000)	110 000	(70 000)	20 000	200 000	170 000	(0)						
4251 Unmeasured Water	884 580	(13 430)	(6 000 000)	5 275 511	113 792	(101 186)	70 461	57 032	1 041 602	1 042 611	1 009	0	0	0	0	0	1 333 770	1 334 291	0	0	521	0	0	0	0	0	0	0	0	0	0	1			
4351 Unmeasured Sewerage	1 255 394	(17 800)	(17 800)	0	0	0	78 376	1 333 770	1 334 291	521	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
4411 Trade E fluent	5 649 390	493 184	(501 584)	629 811	0	0	609 381	6 154 667	7 134 666	980 199	(10 513)	11 095	(287 500)	1 267 110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
80 067 595	6 224 661	15 735 146	13 231 290	362 079	(228 310)	166 730	0	5 349 280	65 415 845	65 324 712	(91 130)	(174 000)	35 000	326 536	(314 933)	297 500	(1 462 120)	146 544	(137 055)	(331 000)	115 000	2 336	140 000	(140 000)	110 000	(70 000)	500 000	100 000	500 000	275 000	(2)				

Appendix D – Reconciliation of Debtors account on Oracle

NORTHERN IRELAND WATER LIMITED AS AT 31 MARCH 2013	
Summary of Debtors	
Water & Sewerage Debtors GL code 1210	Mar 2013
Opening Balance	£10,686,438.36
Take on Bills/New Bills- TOTAL	£10,783,788.51
Take on Bills/New Bills- Sewerage	2,059,716.38
Take on Bills/New Bills- Water	8,612,432.67
Take on Bills/New Bills- VAT	111,639.46
Annual Billing	0.00
Annual Billing - VAT	0.00
Discounts	82.33
System Adjustments- Total	-£4,771,461.68
System Adjustments- Sewerage	571,768.20
System Adjustments- Water	(5,400,155.15)
System Adjustments- VAT	56,925.27
Manual Adjustments- Total	-£62,784.83
Manual Adjustments- Sewerage	(10,510.82)
Manual Adjustments- Water	(49,690.54)
Manual Adjustments- VAT	(2,583.47)
Write Off Adjustments Total	£17,946.07
Write Off Adjustments- Sewerage	0.00
Write Off Adjustments- Water	17,946.07
Write Off Adjustments- VAT	0.00
NIWS Bad Debt Authorised Write Off- Total	-£213,068.17
NIWS Authorised Write Off- Sewerage	(75,701.16)
NIWS Authorised Write Off- Water	(131,829.24)
NIWS Authorised Write Off- VAT	(5,537.77)
Net Cash	(5,096,152.88)
Refunds	129,130.17
Water & Sewerage GL code 1210 Closing Balance	£11,473,917.88
Check	
Metered & Unmetered Water & Sewerage Debtors	£11,473,917.88
(AS per Crystal)	
Per Tb GL code 1210	9,485,307.69
Variance	£1,988,610.19
Due to:	
Referred Bills NOT Recognised NET	(228,312.00)
System Adjustment Reduction	(1,550,000.00)
Various MS Adjustments	(210,000.00)
Unknown	-£298.19
Trade Effluent Debtors GL code 1213	
Opening Balance	£1,033,758.22
Take on Bills/New Bills	459,243.57
System Adjustments	-£24,782.23
Manual Adjustments	-£1,307.39
Write Off Adjustments	
NIWS Authorised Bad Debt Write Off	£0.00
Net Cash	-£723,908.38
Refunds	-£4,996.18
Trade Effluent GL code 1213 Closing Balance	£738,007.61
Variance	£0.00
Per Trial Balance general ledger code 1213	738,008
Referred Bills	
Total Opening Balance GL code 1213 & 1210	£11,720,196.58
Take on Bills/New Bills	£11,243,032.08
Annual Billing	£0.00
Discounts	£82.33
System Adjustments	-£4,796,243.91
Manual Adjustments	-£64,092.22
Write Off Adjustments	£17,946.07
NIWS Authorised Bad Debt Write Off	-£213,068.17
Net Cash	-£5,820,061.26
Refunds	£124,133.99
Total Closing Balance GL code 1213 & 1210	£12,211,925.49
Balance as per FN012 Summary	£12,211,455.91
Difference	£469.58

Appendix E – Reconciliation of Accrued Income Account

NIW Accrued Income	
	Mar-13
Per Echo	
Measured Water	7,392
Measured Sewerage	5,276
Trade Effluent	624
Accrued income	13,291
Accrued income adjustments	
Test Meter (net accrued income)	0
Voids not billed in unmeasured	82
DCR Provision	-316
DCR Further	-500
██████████	24
Accrued Income provision	-137
Hospital TE	-1453
Extra LUT accrued income	115
ELD Dom Allowance Provision	-331
██████████ Release	
Accrued income posted	10,777
Per TB	10,777
Difference	<u>0</u>
Miscellaneous accrued Income	194
Interest Received Accrual	7
Total Accrued Income	<u>10,978</u>
Signed:	
TB Check	
1420 - Metered Water Accrued Income	8,880,910.11
1423 - Trade Effluent Accrued Income	1,896,298.80
1426 - Miscellaneous Accrued Income	193,812.20
1451 - Interest Received Accrual	6,806.05
	<u>10,977,827.16</u>

**Appendix G – Reconciliation of invoices and system adjustments as at 31
March 2013**

	Trans Rpt	GL Posting	Variance
Measured Water	3,191,227	3,193,973	(2,746)
Measured Sewerage	2,634,849	2,638,875	(4,026)
Unmeasured Water	(10,694)	(13,439)	2,745
Unmeasured Sewerage	(13,875)	(17,902)	4,027
TE	433,154	433,154	(0)
Sub-total	6,234,661	6,234,661	(0)
Discount	82	82	0
VAT	165,981	165,981	0
TOTAL	6,400,724	6,400,724	0
Bad debt	(207,530)	(207,530)	0

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).

$$\text{Average annual rainfall} = 1.14\text{m}$$

- 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 Formula element	Cost (£) Per m ³	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 2010 (TOTAL)**

DESCRIPTION		UNITS	DP	1	2	3	4
				2009-10	2010-11	2011-12	2012-13
A FIXED ASSETS							
1	Tangible assets	£m	3	7389.297	7825.616	8147.759	8438.992
2	Third party contributions	£m	3	-141.802	-198.736	-255.418	-313.278
B OTHER OPERATING ASSETS AND LIABILITIES							
3	Working capital	£m	3	-91.609	-79.116	-80.503	-81.590
4	Cash	£m	3	0.349	-3.272	-2.340	9.102
5	Short term deposits	£m	3	10.000	15.000	0.000	5.300
6	Overdrafts	£m	3	0.000	0.000	0.000	0.000
7	Infrastructure renewals prepayment/(accrual)	£m	3	1.452	-3.044	2.734	3.341
8	Net operating assets	£m	3	-79.808	-70.432	-80.109	-63.847
C NON-OPERATING ASSETS AND LIABILITIES							
9	Borrowings	£m	3	0.000	0.000	0.000	0.000
10	Non-trade debtors	£m	3	1.491	0.010	0.006	0.007
11	Non-trade creditors due within one year	£m	3	-3.833	-3.844	-4.141	-5.218
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	0.106
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	-627.560	-737.560	-807.560	-882.560
18	Other creditors	£m	3	-106.136	-102.624	-98.978	-96.184
E PROVISION FOR LIABILITIES AND CHARGES							
19	Deferred tax provision	£m	3	-42.713	-144.282	-162.493	-187.416
20	Post employment asset / (liabilities)	£m	3	2.286	4.586	7.253	-4.123
21	Other provisions	£m	3	-32.884	-19.349	-20.679	-9.589
F PREFERENCE SHARE CAPITAL							
22	Preference share capital	£m	3	0.000	0.000	0.000	0.000
23	Net assets employed	£m	3	6358.444	6553.491	6725.746	6876.890
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	-93.045	-227.538	-287.995	-355.720
27	Current cost reserve at 31 March	£m	3	5779.799	6109.339	6342.051	6560.920
28	Other reserves	£m	3	171.690	171.690	171.690	171.690
29	Total capital and reserves	£m	3	6358.444	6553.491	6725.746	6876.890

Table 24 – CC Balance Sheet as at 31 March 2013

The retained current cost loss for the year is £56.190m. The P&L reserves in the balance sheet decreased by £67.725m. The difference of £11.535m represents the loss on the pension fund net of deferred tax, as shown below:

Retained loss for the year	£ (56.190m)
Pension scheme loss net of deferred tax	£ (11.535m)
Movement in P&L Account	£ (67.725m)

- 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	2.980	18.335	0.440	21.755

Line 11: Non-trade creditors due within one year

	Alpha
	£m
Lease obligation due < 1 yr	2.422

Line 18: Other Creditors

	Alpha
	£m
Lease obligation due > 1 yr	95.111

Line 21 - Other provisions

	Omega
	£m
Provisions	7.053

Significant features and movements**Line 1 - Tangible assets**

See commentary to Table 19.

Line 2 - Third party contributions

Increased by approximately £57.86m shown as follows:

	£m
Infrastructure contributions (including £47.6 m sewers adopted)	52.4
Non Infrastructure contributions (including £0.7m adoptions)	1.6
Amortisation of non- infrastructure contributions and government grants	(4.5)
Indexation	<u>8.4</u>
	<u>57.9</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	3132.739	952.234	44.325	4129.298	3099.681	1398.533	47.416	4545.630	8674.928
2	AMP adjustment	£m	3									
3	RPI adjustment	£m	3	102.072	29.881	1.395	133.348	101.230	41.572	1.796	144.598	277.946
4	Disposals	£m	3	-0.063	-9.808	-1.251	-11.122	0.000	-0.962	-1.752	-2.714	-13.836
5	Additions	£m	3	21.402	23.147	2.678	47.227	61.743	71.783	1.914	135.440	182.667
6	Gross replacement cost at 31 March	£m	3	3256.150	995.454	47.147	4298.751	3262.654	1510.926	49.374	4822.954	9121.705
B DEPRECIATION												
7	Depreciation at 1 April	£m	3	11.683	191.201	27.165	230.049	0.000	264.283	32.837	297.120	527.169
8	AMP adjustment	£m	3									
9	AMP adjustment - gross MEA revaluation	£m	3									
10	AMP adjustment - amendment to remaining useful econ	£m	3									
11	RPI adjustment	£m	3	0.383	6.272	1.227	7.882	0.000	8.671	1.058	9.729	17.611
12	Disposals	£m	3	-0.063	-9.545	-1.154	-10.762	0.000	-0.585	-1.615	-2.200	-12.962
13	Charge for year	£m	3	39.984	39.604	4.505	84.093	1.277	60.888	4.637	66.802	150.895
14	Depreciation at 31 March	£m	3	51.987	227.532	31.743	311.262	1.277	333.257	36.917	371.451	682.713
15	Net book amount at 31 March	£m	3	3204.163	767.922	15.404	3987.489	3261.377	1177.669	12.457	4451.503	8438.992
16	Net book amount at 1 April	£m	3	3121.056	761.033	17.160	3899.249	3099.681	1134.250	14.579	4248.510	8147.759

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 2012 have been brought forward from the total closing balances for gross replacement cost and depreciation at 31 March 2012. 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 2012, all assets in the Fixed Asset Register (FAR) were indexed upwards using year end Retail Price Index (RPI) to be consistent with OFWAT. This was adjusted for assets disposed of in April 2012, if there were any, as they were not indexed.

Impairment

There was an impairment of surplus lands, buildings and civils during the year totalling £925k following a review of assets for disposal by McKibbin & Co.

Disposals

Disposals during the year mainly consisted of surplus land, civil structures and mobile plants (lorries and vans). All disposals have depreciation in the month of disposal.

Decommissioned Assets

A number of assets (NCRC - £57,764,980.77) 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.

There was an element relating to dams totalling £40,579k which were decommissioned as they were no longer operational and sit under the infrastructure column.

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	159,903
Add: Water and sewer connections	2,843
Add: Capital maintenance Omega and Kinnegar	1,291
Add: adopted assets – infrastructure	47,564
Add: adopted assets – non-infrastructure	669
Less: de-capitalised assets	(247)
Add: capitalised interest	3,839
Less: expenditure classified as opex under IFRS	(985)
Other adjustments	(3)
Total additions per statutory accounts	214,874
Less Capital maintenance Omega and Kinnegar	(1,291)
Add back: IRE treated as opex repairs under IFRS	985
Less: interest capitalised	(3,839)
Less: IRE	(31,368)
Add: PPP residual interest	3,303
Other adjustments	3
Total additions per regulatory accounts	182,667

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 £490k, 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 £3,720,000 which is included in Table 25 under specialised operational civil. The total residual interest at 31 March 2013 is £16,424,000 (31 March 2012: £12,704,000).

Depreciation Charge for Year

Current cost depreciation charge during the year was calculated based on the opening GCRC at 1 April 2012. 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 £98,277,726.48 (11/12: £100,560,469.28) as at 31 March 2013, 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
				2009-10	2010-11	2011-12	2012-13
DESCRIPTION		UNITS	DP				
1	Stocks	£m	3	1.865	1.863	2.177	2.379
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	13.587	10.908	7.191	7.596
5	Trade debtors - unmeasured non household	£m	3	0.296	0.000	3.084	0.402
6	Other trade debtors	£m	3	2.907	1.021	2.084	0.612
7	Measured income accrual	£m	3	16.197	8.761	12.393	10.777
8	Prepayments and other debtors	£m	3	6.407	8.097	9.025	9.431
9	Trade creditors	£m	3	-14.989	-9.498	-11.711	-2.620
10	Deferred income - customer advance receipts	£m	3	-1.677	-1.342	-3.768	-1.164
11	Short term capital creditors	£m	3	-72.643	-52.697	-56.206	-56.699
12	Accruals and other creditors	£m	3	-43.559	-46.229	-44.772	-52.304
13	Total working capital	£m	3	-91.609	-79.116	-80.503	-81.590

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
2.980	18.335	0.440	21.755

Significant movements from last year**Line 4 - Trade debtors - measured non household**

This has increased from £7.2m to £7.6m (5.6%).

Line 5 - Trade debtors - unmeasured non household

This has decreased from £3.1m in 2011-12 to £0.4m. The billing run for the unmeasured customers for 2012-13 was completed before 31st March 2012 and this led to a higher than normal unmeasured non household debtors balance at 31st March 2012. The timing of this billing run has reverted for 2013-14 to the commencement of the financial year and therefore debtors in this category at 31st March 2013 are at a relatively low level.

Line 6 - Other trade debtors

This has decreased from £2.1m to £0.6m (71.4%). This is primarily because an invoice for approximately £1.5m was issued just before the year end close at 31st March 2012 and this was shown in the Other trade debtors balance at that date. This was an untypically large invoice in relation to a developer contribution that significantly increased the debtor balance at 31st March 2012. This invoice was paid in the early part of 2012-13.

Line 7 - Measured income accrual

This has decreased by £1.6m (13.0%) over the period.

Line 9 - Trade creditors

Trade creditors have fallen by £9.1m (77.6%) in the period. This is due to invoices received in relation to capital purchases being less than usual with a consequential increase in the balance for Capital Creditors (accruals) within Line 11 shown below.

Line 10 - Deferred income – customer advance receipts

Deferred income – customer advance receipts have fallen by £2.604m (69.1%) in the period. Similarly to line 5 above, this is primarily due to the fact that the billing run for the unmeasured customers for 2012-13 was completed before 31st March 2012. These bills are for 12 months in advance and the income is deferred and released uniformly during 2012-13. The unmeasured billing for 2013-14 occurred in the first months of the 2013-14 year.

Line 11 - Short term capital creditors

Capital accruals have risen by approximately £0.5m (0.9%). This is in the context of a fall in relevant* capital additions of 15.6% from £189.4m in 2012 to £159.9m in 2013. This should have led to a similar fall in capital creditors but Line 9 Trade Creditors shown above indicates that invoices outstanding in relation to capital purchases at 31st March 2013 (which would be contained within the Trade Creditors balance) were less than normal with capital accruals consequently higher than expected.

*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				2009-10	2010-11	2011-12	2012-13
	UNITS	DP					
1	Current cost reserve at 1 April	£m	3				6342.051
2	AMP adjustment	£m	3				0.000
A	RPI ADJUSTMENTS						
3	Fixed assets	£m	3				260.354
4	Working capital adjustment	£m	3				-2.641
5	Financing adjustment	£m	3				-30.464
6	Grants and third party contributions	£m	3				-8.380
7	Current cost reserve at 31 March	£m	3				6560.920

Table 27 – Movement on current cost reserve**Working capital adjustment**

The working capital adjustment includes opening stock at 1st April 2012 plus all the opening short – term debtors and creditors at 1st April 2012, with the following exclusions from the calculation:

• Stock		
Stock relating to unappointed activities		£0.008m
• Debtors		
Interest receivable		£0.007m
Debtors relating to unappointed activities		£0.404m
• Creditors		
Interest payable		£2.678m
Cash bond interest payable		£0.118m
Creditors relating to unappointed activities		£0.440m
Deferred grants and contributions < 1yr		£0.808m
PPP Finance lease creditor < 1yr		£2.422m

The following indices have been used and applied to the opening working capital balance at 1 April 2012:

RPI	2013	2012
Year end RPI	248.7	240.8
Change in 2012-13	3.28073%	

Working capital adjustment = opening working capital at 1 April 2012 x change in RPI 2012-2013 = £80,503k x 3.28073% = £2,641k

Financing adjustment

The financing adjustment is calculated using opening balances at 01.04.12 as follows:

	£m
Opening net assets	6,725.746
Less Opening net fixed assets	7,892.341
	<u>- 1,166.59</u>
	5
Add back: working capital	<u>80.503</u>
=Opening net finance	-1,086.092
Less:	
Ordinary share dividends payable	0.000
Deferred tax provision	162.493
Less:	
Pension asset	-7.253
Add back:	
Deferred tax liability on pension asset	2.291
= Revised opening net finance	-928.561
X RPI	<u>3.28%</u>
Financing Adjustment	<u>30.464</u>

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 28 REGULATORY ACCOUNTS
CASH FLOW STATEMENT FOR YEAR ENDING 31 MARCH (TOTAL)

DESCRIPTION	UNITS	DP	1	2	3	4
			2009-10	2010-11	2011-12	2012-13
1 Net cashflow from operating activities	£m	3	137.968	151.177	179.166	181.015
A RETURN ON INVESTMENTS & SERVICING OF FINANCE						
2 Interest received	£m	3	0.247	0.212	0.114	0.134
3 Interest paid	£m	3	-26.905	-34.640	-39.337	-42.208
4 Interest in finance lease rentals	£m	3	-11.325	-12.215	-11.750	-11.913
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	-37.983	-46.643	-50.973	-53.987
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	-213.359	-156.548	-153.100	-130.590
9 Receipts of grants and contributions	£m	3	6.514	6.887	5.618	5.757
10 Infrastructure renewals expenditure	£m	3	-38.396	-24.897	-35.847	-31.368
11 Disposal of fixed assets	£m	3	0.494	0.251	0.304	1.177
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	-244.747	-174.307	-183.025	-155.024
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	-34.537	-35.570	-25.604	-26.587
F MANAGEMENT OF LIQUID RESOURCES						
16 Net cashflow from management of liquid resources	£m	3	9.000	-5.000	15.000	-5.300
17 Net cashflow before financing	£m	3	-170.299	-110.343	-65.436	-59.883
G FINANCING						
18 Capital in finance lease rentals	£m	3	-2.906	-3.278	-3.632	-3.675
19 New bank loans taken out	£m	3	170.000	110.000	70.000	75.000
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	167.094	106.722	66.368	71.325
23 Increase/(decrease) in cash in the year	£m	3	-3.205	-3.621	0.932	11.442

Table 28 – Cashflow statement**Significant movements from last period****Line 1 - Net cashflow from operating activities**

This has increased by £1.849m (1.0%). 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 7.3% from £39.337m to £42.208. This is consistent with an additional loan drawdown of £75m in 2012-2013. 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)

Line 4 - Interest in finance lease rentals

The Alpha project during 2012-2013 gave rise to £11.913m (2011: £11.750m) interest payable on the associated finance lease.

Line 8 - Gross cost of purchase of fixed assets

These have decreased by £22.510m (14.7%). This is consistent with capital expenditure plans for 2012-13 and the movement in capital creditors across the period.

Line 10 - Infrastructure Renewals Expenditure

IRE for 2012-2013 compared to 2011-2012 can be shown as follows:

IRE	2012-2013	2011-2012	Increase/(Decrease) in period	Increase/(Decrease) in period
		£m	£m	%
Water	22.593	26.803	(4.210)	(15.7)
Sewerage	8.775	9.044	(0.269)	(3.0)
Total	31.368	35.847	(4.479)	(12.5)

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 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 increased by £5.3m from the end of 2011-2012 to the end of 2012-2013 with a consequent decrease in cashflow. The balance on deposit at the end of 31st March 2013 is £5.3m.

Line 18 - Capital in finance lease rentals.

An amount of £3.675m was made in payment against the Alpha PPP finance lease.

Line 19 - New bank loans taken out

In 2012-2013 £75m 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	19.872
2	Working capital adjustment	£m	(2.641)
3	Movement in working capital	£m	0.595
4	Depreciation	£m	150.895
5	Current cost profit on sale of fixed assets	£m	(0.303)
6	Infrastructure renewals charge	£m	30.761
7	Other non-cash profit and loss items	£m	(18.164)
8	Net cash flow from operating activities	£m	181.015

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 £0.490m in respect of capital maintenance additions for Alpha PPP paid for via the unitary payments. All other capital expenditure for Alpha is accounted for through the repayment of the finance lease.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 29 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
RECONCILIATION OF OPERATING PROFIT TO NET CASH FLOW FROM OPERATING ACTIVITIES (TOTAL)**

DESCRIPTION		UNITS	DP	1	2	3	4
				2009-10	2010-11	2011-12	2012-13
1	Current cost operating profit	£m	3	22.963	8.893	2.181	19.872
2	Working capital adjustment	£m	3	-4.313	-4.898	-2.824	-2.641
3	Movement in working capital	£m	3	-13.701	7.453	-2.122	0.595
4	Receipts from other income	£m	3	0.000	0.000	0.000	0.000
5	Depreciation	£m	3	96.202	132.147	157.761	150.895
6	Current cost profit on sale of fixed assets	£m	3	-0.005	-0.079	0.285	-0.303
7	Infrastructure renewals charge	£m	3	37.035	29.393	30.069	30.761
8	Other non-cash profit and loss items	£m	3	-0.213	-21.732	-6.184	-18.164
9	Net cash flow from operating activities	£m	3	137.968	151.177	179.166	181.015

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	1.653	2.038	3.691				3.691
2	Water treatment works	£m	3		1.754	1.754				1.754
3	Water distribution mains	£m	3	21.302	1.026	22.328				22.328
4	Service reservoirs and water towers	£m	3		1.139	1.139				1.139
5	Pumping stations	£m	3		0.612	0.612				0.612
6	Water management and general	£m	3	0.109	1.246	1.355				1.355
7	Sewerage	£m	3				60.204	0.169	60.373	60.373
8	Sea outfalls and headworks	£m	3				2.218	0.124	2.343	2.343
9	Sewage treatment works	£m	3					21.602	21.602	21.602
10	Sludge treatment works	£m	3					0.437	0.437	0.437
11	Sludge disposal	£m	3				0.000	0.000	0.000	0.000
12	In-line pumping stations	£m	3					2.631	2.631	2.631
13	Terminal pumping stations	£m	3					2.202	2.202	2.202
14	Sewerage management and general	£m	3					1.212	1.486	1.486
15	Total infrastructure additions (Enhancement)	£m	3	23.064		23.064	62.697		62.697	85.761
16	Total non-infrastructure additions (Enhancement)	£m	3		7.815	7.815		28.378	28.378	36.194
17	Total additions (Enhancement)	£m	3	23.064	7.815	30.880	62.697	28.378	91.076	121.955
B NIW BASE SERVICE PROVISION										
18	Water resource facilities	£m	3	0.603	0.104	0.708				0.708
19	Water treatment works	£m	3		3.896	3.896				3.896
20	Water distribution mains	£m	3	19.824	2.216	22.039				22.039
21	Service reservoirs and water towers	£m	3		1.010	1.010				1.010
22	Pumping stations	£m	3		1.062	1.062				1.062
23	Water management and general	£m	3	2.088	7.621	9.708				9.708
24	Sewerage	£m	3				7.576	0.547	8.122	8.122
25	Sea outfalls and headworks	£m	3				0.055	0.000	0.055	0.055
26	Sewage treatment works	£m	3					23.894	23.894	23.894
27	Sludge treatment works	£m	3					0.535	0.535	0.535
28	Sludge disposal	£m	3				0.000	0.000	0.000	0.000
29	In-line pumping stations	£m	3					6.722	6.722	6.722
30	Terminal pumping stations	£m	3					4.095	4.095	4.095
31	Sewerage management and general	£m	3					5.466	6.444	6.444
32	Total infrastructure renewals (Base)	£m	3	22.514		22.514	8.609		8.609	31.123
33	Total non-infrastructure expenditure (Base)	£m	3		15.909	15.909		41.258	41.258	57.167
34	Total expenditure (Base service provision)	£m	3	22.514	15.909	38.423	8.609	41.258	49.867	88.290

Table 32 – Analysis of Fixed Asset Additions and Asset Maintenance by Asset Type (Current Cost Accounting)**PPP**

No PPP expenditure is reported on this table. There was no capital spend in 2012/13 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 £490k.

General

The main types of new assets constructed in the year were distribution mains, sewerage assets and waste water treatment works to ensure compliance with obligations to improve quality standards as agreed with the Drinking Water Inspectorate and the Northern Ireland Environment Agency.

The majority of asset maintenance expenditure related to water distribution mains (Water rehabilitation projects), sewerage assets (Drainage Area Plan projects), wastewater treatment works and water treatment works in order to maintain the serviceability of the asset base for customers.

The Capital Investment Driver Allocation methodology has remained as per the 2010/11 approach reflecting the Reporter Recommendations from AIR10. This is different from that adopted in PC10 and affects the allocation to both Trunk Mains and Sewers. This change is discussed in more detail in Chapter 34.

The allocation methodology for Management and General expenditure is reflective of the individual projects and in some cases will differ from that allocation assumed in the PC10 FD. These changes are further discussed in Chapter 34. 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.

Expenditure for Zonal Study investigations has been allocated to Water M & G/ Base/Infrastructure Expenditure and Drainage Area studies have been allocated to Sewerage M & G/Base/Infrastructure/ for 12/13 reporting. Expenditure in these two areas has been separately identified within Asset Management Directorate expenditure since 10/11 and is not confused with the resultant delivery projects managed within Engineering Procurement Directorate. 2010/11 was the last year in which the same project code was used for the Study stage and subsequent project delivery.

Sewer adoptions paid by third parties of £47.564m are included in column 4, line 7 of Table 32 within Sewerage infrastructure enhancements. Sewerage Pumping Stations paid by third parties of £0.669m are included in Col 5, line 12 within Sewerage non infrastructure enhancements.

The value of sewer adoptions in 2012/13 is very similar to that of 2011/12.

Despite the private housing market being 'flat' for the past three to four years the number of new developments is rising due to significant input from the social housing arena and the result is a 35% increase in new development authorisations since 2009.

The primary reasons for the increase in the Asset Adoptions since 2010/11 as follows:

- Developers are under considerable pressure from banks and bond providers to clear the bond and hence their financial liabilities – this has resulted in additional requests for Final Adoption of sewerage systems
- NI Water Developer Services team have been pro-active in dealing with a backlog / mature developments in reviewing old sites and working with DRD Roads Service to clear a number of outstanding sites. This workstream is estimated to take at least 10 years to complete (i.e. 2007 -2017).

The calculation of gross asset valuation for adopted sewerage assets is based on the unit costs derived for PC10 which was indexed to 12/13 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.

Of the total capital expenditure of £210.245m (net of grants and contributions on infrastructure maintenance expenditure which totalled £245k and inclusive of sewerage adoptions), £88.287m (42%) related to base service position. This is reflective of a similar investment percentage compared to 2011/12. Further detail can be found in commentary to Table 40. The £245k contributions income is split as £79k for water and 166k for sewerage.

Backlog Base as applied during the SBP years is not longer adopted. All former Backlog Base expenditure is now treated as Base Maintenance.

Infrastructure Renewals expenditure has been reported net of any grants and contributions in this table.

Reconciliation between Table 32, 35 and 36

Table 32 - Line 17 + Line 34 in col 7	<u>£210.245m</u>
Table 35 – line 28 col 4	£ 69.303m
Table 36 – line 25 col 4	£ 92.709m
Assets adopted at nil cost	<u>£ 48.233m</u>
Reconciliation total	<u>£240.245m</u>

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					
			As per SBP (2007-10)	As at 31 March	Per PC10 2012-13	Actual 2012-13		As per SBP (2007-10)	As at 31 March	Per PC10 2012-13	Actual 2012-13		As per SBP (2007-10)	As at 31 March	Per PC10 2012-13	Actual 2012-13		
A DEPRECIATION CHARGE FOR THE YEAR																		
1	CCD as at 31 March 2010	£m	3	95.838	102.89			96.796	126.442			B3	192.634	229.332			B3	
2	CCD on additions (enhancement assets) post 1 April 2010	£m	3							3.796	4.695	B3			5.852	6.371	B3	
3	CCD on additions (MNI assets) post 1 April 2010	£m	3			2.056	1.676			4.712	8.192	B3			7.766	12.925	B3	
4	Total depreciation charge for the year	£m	3			3.054	4.733			8.508	12.887	B3			13.618	19.296	B3	
5	Total depreciation charged	£m	3	95.838	102.89	5.11	6.409	96.796	126.442	62.984	66.802	B3	192.634	229.332	107.588	146.888	B3	
						44.604	80.086											
DESCRIPTION	UNITS	DP	1	2	3	4	CG	5	6	7	8	CG	9	10	11	12	CG	
			Water Service					Sewerage Service					Total					
			As per SBP (2007-10)	As at 31 March	Per PC10 2012-13	Actual 2012-13		As per SBP (2007-10)	As at 31 March	Per PC10 2012-13	Actual 2012-13		As per SBP (2007-10)	As at 31 March	Per PC10 2012-13	Actual 2012-13		
B INFRASTRUCTURE RENEWALS CHARGES, EXPENDITURE AND PROVISION																		
6	Infrastructure renewals expenditure	£m	3	69.105	79.215	19.902	22.593	35.019	24.288	10.858	8.775	B2	104.124	103.503	30.76	31.368	B2	
7	Infrastructure renewals charges	£m	3	85.962	76.948	19.902	19.902	28.535	26.622	10.858	10.859	C5	114.497	103.57	30.76	30.761	C5	
8	Infrastructure renewals prepayment/ (accrual)	£m	3	-16.857	2.267	-16.857	13.653	6.484	-2.334	6.484	-10.312	C5	-10.373	-0.067	-10.373	3.341	C5	

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 33 FINANCIAL MEASURES (CURRENT COST ACCOUNTING)

DEPRECIATION CHARGE BY ASSET TYPE (Total)

DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7	8	9	10	11	12	CG	
			Water Service				Sewerage Service				Total					
			As per SBP (2007-10)	As at 31 March	Per PC10 2012-13	Actual 2012-13	As per SBP (2007-10)	As at 31 March	Per PC10 2012-13	Actual 2012-13	As per SBP (2007-10)	As at 31 March 2010	Per PC10 2012-13	Actual 2012-13		
A DEPRECIATION CHARGE FOR THE YEAR																
1	CCD as at 31 March 2010	£m	3	100.241	107.293			96.796	126.442			197.037	233.735		B3	
2	CCD on additions (enhancement assets) post 1 April 2010	£m	3			2.056	1.682			3.796	4.695			5.852	6.377	B3
3	CCD on additions (MNI assets) post 1 April 2010	£m	3			3.054	4.755			4.712	8.192			7.766	12.947	B3
4	Total depreciation charge for the year	£m	3			5.110	6.437			8.508	12.887			13.618	19.324	B3
5	Total depreciation charge	£m	3	100.241	107.293	48.438	84.093	96.796	126.442	62.984	66.802	197.037	233.735	111.422	150.895	B3
B INFRASTRUCTURE RENEWALS CHARGES, EXPENDITURE AND PROVISION																
6	Infrastructure renewals expenditure	£m	3	69.105	84.139	19.902	22.593	35.019	24.288	10.858	8.775	104.124	108.427	30.760	31.368	B2
7	Infrastructure renewals charges	£m	3	85.962	80.353	19.902	19.902	28.535	26.622	10.858	10.859	114.497	106.975	30.760	30.761	C5
8	Infrastructure renewals prepayment/ (accrual)	£m	3	-16.857	3.786	-16.857	13.653	6.484	-2.334	6.484	-10.312	-10.373	1.452	-10.373	3.341	C5

Table 33 – Depreciation Charge by Asset Type & Infrastructure Renewals Charge

Commentary and Methodology

Methodology

Current Cost Depreciation (CCD) Charge

1. 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
2. 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%.
3. Columns 4 and 8 (Block A) have been populated using the depreciation on commissioned assets post 1 April 2010. The FAR was developed during the SBP period to capture the information to enable these lines to be populated correctly with all depreciation related to historic assets being included in Columns 1, 2, 5 and 6 (Block A).
4. Columns 3 and 7 (Block A) have been populated using the PC10 depreciation figure for 2012/13.
5. 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.
6. Assets to be decommissioned or written off resulted in accelerated depreciation in the year. Assets with a NCRC of £57,764,980.77 were decommissioned in 2012/2013 – the corresponding accelerated depreciation is included in Table 33.
7. 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.

8. Depreciation for the year in relation to the PPP Alpha Project (which is on balance sheet) was £4.007m for 2012/13 (2011/12: £11.198m). This is shown separately in the second table for PPP only.
9. 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.
10. 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 (£133k) relating to this has been adjusted through Water Services – CCD on MNI assets. This is the only adjustment made in populating Table 33.
11. 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. An MEAV assessment is planned to be done in PC15.
12. There were no MEA revaluations during the year and therefore no impact on CCD charge in the year.
13. During the year, decommissioned assets with a net current replacement cost (NCRC) of £57,764,980.77 were included within the current year depreciation charge.

	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

	Water (11/12)	Sewerage (11/12)	Total (11/12)
CC Depreciation in year	£ 30,782,561.59	£ 59,301,283.83	£ 90,083,845.42
Accelerated Depreciation	£30,276,196.52	£ 34,261,949.26	£ 64,538,145.78
Impairment 11/12	£ 1,008,621.30	£ 2,129,958.17	£ 3,138,579.47
Total (2011/2012)	£ 62,067,379.41	£ 95,693,191.26	£ 157,760,570.67

14. The depreciation charge for 12/13 (£150,895k) is £6,866k less than 11/12 (£157,761k). Normal depreciation for 12/13 has increased by £2,121k as expected in the trend in recent years from 09/10 of higher spending on the capital programme. Normal decommissioning in the course of the business amounted to £17,186k for the year. There was an element relating to dams totalling £40,579k which were decommissioned and sit under the infrastructure column. There was also an impairment of £925k during the year which went through the depreciation line. Also, 12/13 included a full year's depreciation (£4,007k) of the Alpha PPP asset which was £44k lower than the previous year.

Infrastructure Renewals Accounting

1. The IRC calculation for 12/13 is based on the final determination arising from PC10. The Regulator determined that the IRC and IRE will be the same for the three year period of PC10. The projected IRE forms part of the PC10 capital expenditure plans.
2. The difference between the actual out-turn IRE and the IRC is treated as an accrual or prepayment.

2012-2013 IRC

3. The IRC for 2012-13 based on PC10 can be summarised as follows:

Water	- £19.902m
Sewerage	- £10.859m
Total	- £30.761m

4. The out-turn IRE for 2012-2013 can be shown as follows:

Water	- £22.593m
Sewerage	- £8.775m
Total	- £31.368m

5. The prepayment /accrual at 31 March 2013 can be shown as follows:

	W TOTAL £m	S TOTAL £m	Total TOTAL £m
IRE	22.593	8.775	31.368
IRC	19.902	10.859	30.761
In year prepayment / (accrual)	2.691	(2.084)	0.607
c/f prepayment / (accrual)	10.962	(8.228)	2.734
Cumulative prepayment / (accrual)	13.653	(10.312)	3.341

At the end of the year to 31 March 2013 a prepayment balance of £3.341m was evident. This balance arose as the in-year prepayment of £0.607m for 2012-13 was added to the cumulative brought forward prepayment balance of £2.734m, which existed at 31st March 2012.

In line with the underlying principles of infrastructure renewals accounting it is anticipated that the cumulative level of IRE and IRC will broadly match over the longer term. The current prepayment 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.

6. The SBP and PC10 columns could not be populated for PPP elements as the Financial Model supporting the SBP and PC10 did not allocate IRE and IRC separately to the Alpha Project.
7. 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	
			2009-10	2010-11	2011-12	Report Year 2012-13		2009-10	2010-11	2011-12	Report Year 2012-13		
ACCOUNTING FIXED ASSET ADDITIONS													
NON-INFRASTRUCTURE ASSET ADDITIONS (ENHANCEMENT) BY ASSET LIFE													
A													
1	Very Short	£m	3	0.043	0.137	0.729	0.108	B3	0.033	0.194	0.836	-0.005	B3
2	Short	£m	3	2.464	0.735	0.504	2.457	B2	5.465	2.510	2.999	3.923	B2
3	Medium	£m	3	7.203	3.452	2.843	2.610	B2	27.181	15.988	12.546	10.142	B2
4	Medium long	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	n/a
5	Long	£m	3	9.831	6.343	1.713	2.640	B2	35.558	21.396	12.839	14.217	B2
6	Land	£m	3	0.053	0.017	-0.018	0.000	B3	0.244	0.095	-0.129	0.102	B3
7	Land Disposals	£m	3	-0.061	-0.073	-0.210	-0.285	B2	-0.014	-0.005	0.042	-0.285	B2
8	Total	£m	3	19.534	10.611	5.562	7.530	B2	68.467	40.178	29.133	28.093	B2
NON-INFRASTRUCTURE ASSET ADDITIONS (BASE SERVICE) BY ASSET LIFE													
B													
9	Very Short	£m	3	0.809	1.196	2.229	2.119	B2	0.000	0.590	2.097	1.916	B3
10	Short	£m	3	3.568	0.502	4.182	3.285	B2	5.603	1.823	5.117	4.859	B2
11	Medium	£m	3	5.465	8.022	9.128	6.817	B2	13.966	11.299	26.744	24.145	B2
12	Medium long	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	n/a
13	Long	£m	3	2.451	5.288	4.523	3.688	B2	10.546	9.346	14.049	10.338	B2
14	Total	£m	3	12.293	15.008	20.062	15.909	B2	30.114	23.058	48.006	41.258	B2
NON-INFRASTRUCTURE ADDITIONS AVERAGE LIFE (YEARS)													
C													
15	Very Short	years	0	4	4				4	4			
16	Short	years	0	10	10				10	10			
17	Medium	years	0	20	20				20	20			
18	Medium long	years	0	0	0				0	0			
19	Long	years	0	60	60				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
						2009-10	2010-11	2011-12	Report Year 2012-13		2009-10	2010-11	2011-12	Report Year 2012-13	
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	0.000	0.0000	n/a	
2	Short	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	0.000	n/a	
3	Medium	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	0.000	n/a	
4	Medium long	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	0.000	n/a	
5	Long	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	0.000	n/a	
6	Land	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	0.000	n/a	
7	Land Disposals	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	0.000	n/a	
8	Total	£m	3	0.000	0.000	0.000	0.000	n/a	0.000	0.000	0.000	0.000	0.000	n/a	
NON-INFRASTRUCTURE ASSET ADDITIONS (BASE SERVICE) BY ASSET LIFE															
B															
9	Very Short	£m	3	█	█	█	█	█	█	█	█	█	█	█	
10	Short	£m	3	█	█	█	█	█	█	█	█	█	█	█	
11	Medium	£m	3	█	█	█	█	█	█	█	█	█	█	█	
12	Medium long	£m	3	█	█	█	█	█	█	█	█	█	█	█	
13	Long	£m	3	█	█	█	█	█	█	█	█	█	█	█	
14	Total	£m	3	█	█	█	█	█	█	█	█	█	█	█	
NON-INFRASTRUCTURE ADDITIONS AVERAGE LIFE (YEARS)															
C															
15	Very Short	years	0	0	0					0	n/a				
16	Short	years	0	10	10					10	n/a				
17	Medium	years	0	20	20					20	n/a				
18	Medium long	years	0	0	0					0	n/a				
19	Long	years	0	60	60					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 is planned for 2013/14 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 2 separate streams as follows:

- a) Capital Works Programme delivered by Engineering Procurement Directorate
- b) Operating Capital and 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 with the only significant change being that associated with the Reporter Recommendations applied in AIR10. This is discussed in detail in Chapter 35a and Chapter 36a.

- 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 2012/13 against each project, excluding land acquisition, with a full CIDA output.
 - CIDA lands – this reports the accrual in 2012/13 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 AIR 12 reporting. The model takes the outputs from the above reports from CAPTRAX and completes the tables 32, 34, 35 & 36, with the CWP element of Capital expenditure. The model has been updated to change the allocation of Backlog Base (used in the SBP period but no longer available on new CIDA allocations) from being treated as ESL (application during SBP period) to be treated as Base Maintenance.

Operating Capital and M & G

This area captures all Capital expenditure which is not managed via the CWP. For all Capital projects not on the CWP (herein referred to Operating Capital expenditure) the CIDA information has been captured on the Project A0 form at Project approval and recorded on a Database (AICC) in Finance and Regulation Directorate. A single merged output from ORACLE and the AICC Database is input into a similar model as described above that is used to analyse the output for population of the AIR tables. All expenditure in this category had a full CIDA allocation in 2012/13. CPMR was introduced during 2011/12 to manage expenditure in this area but some refinement is still required before it can be used as the Regulatory reporting tool. The AICC database will be maintained in parallel with CPMR until CPMR can produce the correct outputs.

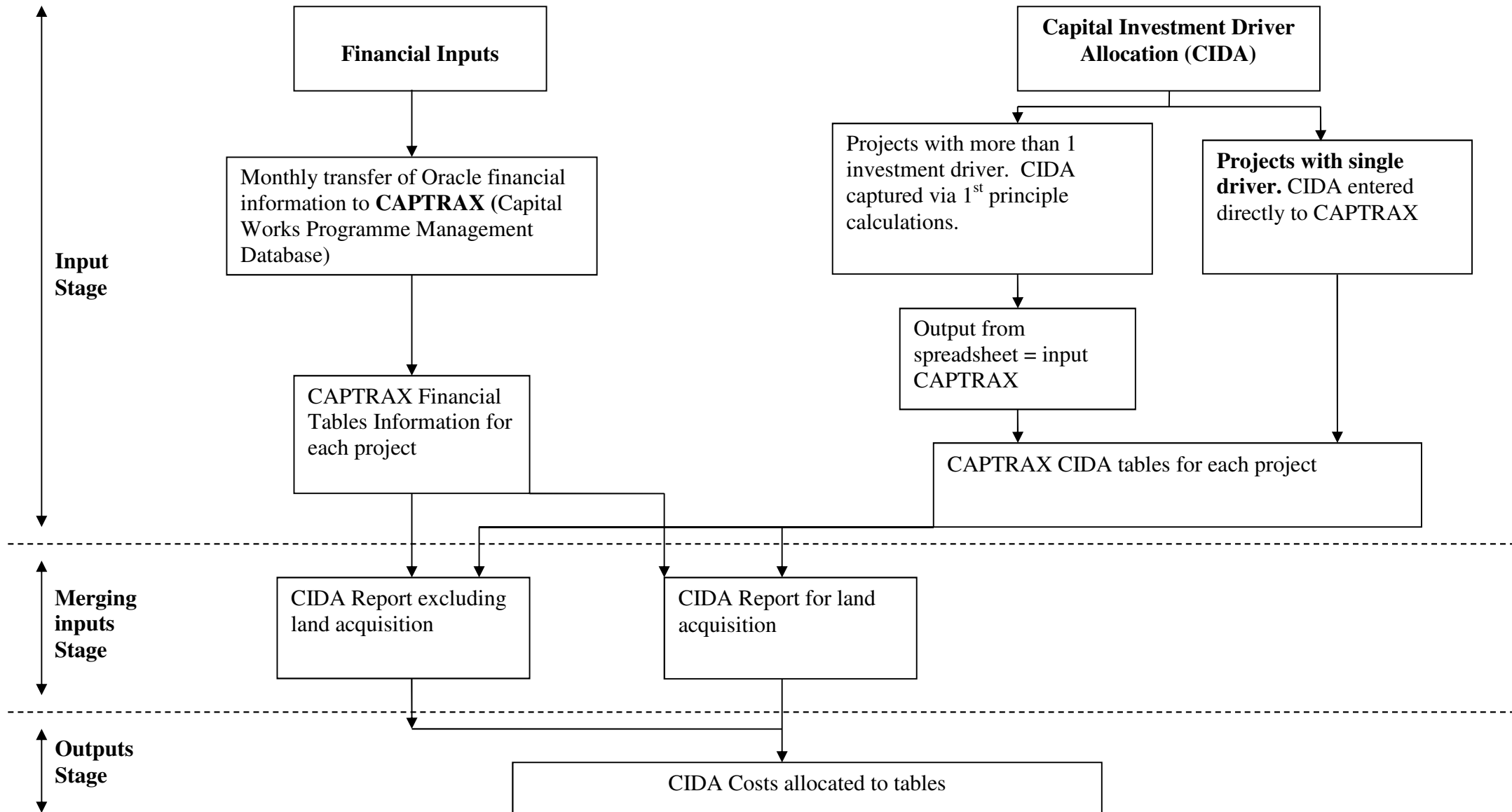
This information has been analysed separately from the CWP and merged on the final output tables.

Table population

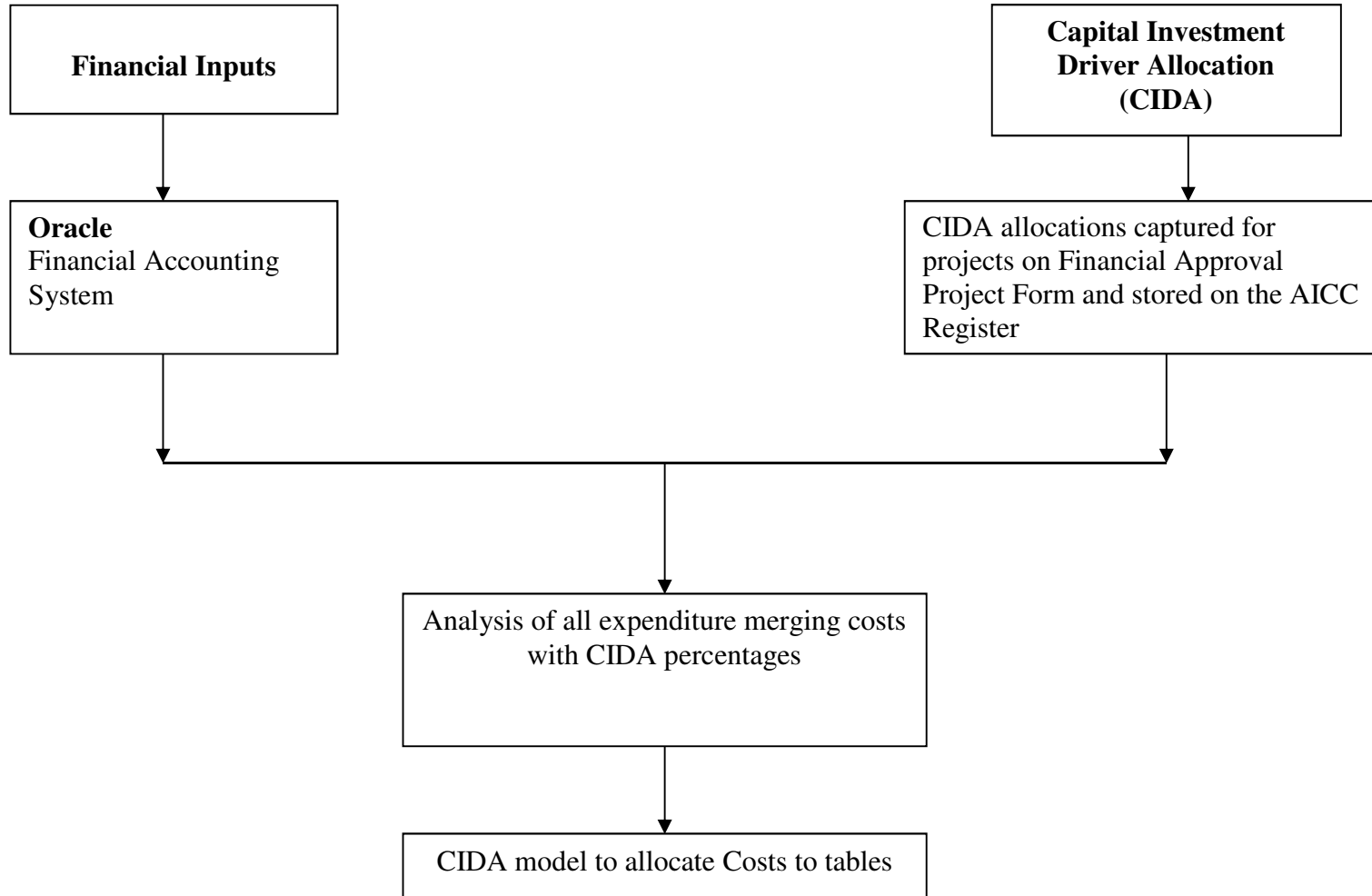
Data used in the population of the table is based on data extracted from the company's core systems and no assumptions are made in the allocation of project expenditure to the lines in the tables for all the expenditure with CIDA directly attributed. For the small rounding figure of £19k of CWP expenditure (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



Process for Completion of Capex financial tables for Operating Capital and M & G Expenditure



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

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 Table 42 and apportioned between Fixed Plant and Civils as per the PPP Contractors Financial model. This is the same process as adopted in AIR09.

PPP - Omega

No PPP OMEGA capital has been reported in the AIR13 financial tables for the following reasons:

- The Capital Cost split between Civils and M & E has been extracted from the Contractors Financial 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 NAIMP2 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 £0.490m on this table relates to the Capital Maintenance element of PPP Alpha expenditure for 2012/13. The £0.490m is reported in Section B of the table and is split using the Asset lives split assumed in the contractors financial model. There is no PPP Capital on Sewerage.

Table 35 - Water service – Expenditure by purpose

Capital expenditure (Capex)

In 2012/13 NIW invested £69.303m, excluding PPP, capital expenditure in water service activities and outputs. Investment has been allocated to purpose categories in line with the CIDA manual and the methodology as outlined in Chapter 34. Detailed explanations of the expenditure and achievements are set out by purpose category below.

Capex: base service provision – infrastructure renewals (NIW)

In 2012/13 NIW invested £22.514m (net) in water service infrastructure renewals. By delivering this investment the company has:

- Renewed 285km of mains (including mains renewed for ENHANCEMENT)
- Replaced 8566 communication pipes (not including lead replacement).

In 2012/13 there is a difference in the IRE (net) and IRE (gross) of £0.079m which relates to income received for watermain diversions.

Capex: base service provision-maintenance non-infrastructure (NIW)

In 2012/13 NIW invested £15.909m (gross) in the maintenance of water non-infrastructure assets. In doing so the company has:

- Invested at many sites/assets under our refurbishment programme.
- The Service reservoir rehab programme was unable to delivery during 2012/13 as the Procurement Framework was not available.
- Invested in Management and General activities (water), to maintain non-operational assets including improvements to IT systems, Office rationalisation and Vehicle fleet replacement.
- Invested £3.9m in Water Treatment works upgrades. The main sites included in this investment are Clay lake WTW, Killyhevin WTW Standby Generator replacement and Enhanced Site Security at WTW's.
- Installation of Water meters and separations (£1.6m)

Serviceability

The compliance level for drinking water quality, exiting our water treatment works, during 2012, outturned at 99.98%. This was a reduction in the 2011 figure of 100% and is below the KPI target for 2012 of 99.9% compliance. This reduction in compliance was due to individual coliform exceedences at 3 WTWs during 2012. Investigations carried out found that the results did not represent the quality of the water going into supply. The quality of the water was found to be satisfactory.

Expenditure to reduce leakage

Operational expenditure in the Leakage function in 2012/13 was £3.885m

The following table shows the breakdown of expenditure in the Leakage function in 2012/13.

Table 1 – Leakage expenditure

Expenditure category (£m outturn prices)	2012/13 £m
Total Capex	3.327
Total Opex	3.885
Total Expenditure	7.212

The allocations for Leakage expenditure in 2012/13 are in accordance with the PC10 Final Determination Annex N.

The breakdown of capital expenditure in 2012/13 following the breakdown in Annex N is shown in Table 2

Table 2: PC10 Leakage budget and actual spend by activity.

Activity	NI Water PC 10 Leakage budgets			PC10 Period Total	2011/12 actual spend per category £m	2012/13 actual spend per category £m
	Year 2010/11 £k	Year 2011/12 £k	Year 2012/13 £k			
Leakage detection and repair costs						
Leakage detection costs - capex	£545	£541	£538	£1,624	0.541	0.541
Leakage infra replacement repair costs - capex	£231	£229	£227	£687	0.230	0.229
Leakage detection equip	£65	£65	£65	£194	0.013	0.045
Leakage software upgrades and developments	£75	£75	£75	£225	0.029	-0.006
New leakage technology	£15	£15	£15	£45	0.000	0.000
DMA studies	£608	£715	£325	£1,648	0.586	0.605
Trunk Main studies	£200	£100	£120	£420	0.099	0.089
DMA optimisation	£365	£340	£150	£855	0.296	0.125
Water balance asset data assessments	£55	£40	£45	£140	0.061	0.096
ELL reviews	£100	£0	£0	£100	0.067	0.005
Pressure Management	£465	£405	£315	£1,185	0.361	0.409
PRV replacements	£231	£231	£231	£693	0.218	0.215
GSM Loggers/Meter studies/Meter replacement	£734	£734	£734	£2,202	0.721	0.905
Other					0.244	0.071
Total (Capex)	£3,688	£3,490	£2,840	£10,017	3.467	3.327

Capex: quality enhancements (NIW)

In 2012/13 NIW invested £9.972m in water service quality programmes. In doing so the company has:

- Renewed mains as part of the water rehabilitation programme. The quality programme is a significant element of the Rehab programme.
- Upsized mains as part of the water rehabilitation programme. Some of this work is also driven by the quality programme.
- There are no significant non infra water quality projects to report in 2012/13

Capex: new obligations

NIW have not completed any new obligations that were not listed in the PC10 Final Determination. Obligations that are within the Additional outputs sub-programme are reported in the main lines and not treated as a new obligation.

Capex: supply-demand balance (NIW)

In 2012/13 NIW invested £9.2m providing security of supply projects and £0.2m on growth projects as part of the supply-demand balance. This expenditure results partially from proportional expenditure to this service area from delivery of the

Quality enhancement programme as well as security of supply projects resulting from the Water Resource Strategy.

- The Strule Intake project invested £3.5m under this category

In 2012/13 NIW also invested £8.3m in water services supply/demand programme relating to new development (provision on new supplies/connections). In doing so it has:

- Connected 4349 new properties; (4154, household and 195 non-household).

Operating Expenditure (opex)

Line 1 - Opex: Base Service Provision

The Opex in Base Service provision is taken as the Total Base Opex from Table 21(excluding PPP unitary charge) minus the Opex from Capex calculated for Enhancements.

Lines 2 – 6 - Base Service Provision: IRE and MNI

IRE

In 2012/13 £79k was received for the diversion of watermains. This is included on line 6.

MNI

There are no contributions or grants for non infrastructure base projects in 2012/13.

Thus MNI gross and MNI net are the same - lines 3 and 5 and line 4 – MNI grants and contributions is zero.

OPEX from CAPEX

OPEX from CAPEX has been calculated directly from the accounting general ledger for those sites identified as becoming operational during the period 2010/11 – 2012/13. A direct comparison has been completed on a site by site basis of expenditure on the relevant sites pre and post CAPEX investment. After adjusting for inflationary rises the difference is recorded as OPEX from CAPEX. For sites which have been adopted the entire OPEX has been treated as OPEX from CAPEX.

Apportionment within the Table has been completed in accordance with CIDA apportionments to ENHANCEMENT. A separate spreadsheet has been developed to analyse these smaller number of projects using the CIDA ENHANCEMENT outputs (rebalanced to 100%) from the original Capital project to apportion the OPEX from CAPEX.

No PPP Opex from Capex is reported on this table as NIW does not have any data to support such an analysis.

One of the Business Improvement Projects (Cost to Serve) has become operational during the 2010/11 financial year and is being further developed to capture all costs associated with individual sites. For AIR 13 we continue to report primarily OPEX from Capex on smaller sites (e.g. WPS's), on power costs alone. Through 'Cost to Serve' all power costs have been allocated to assets. This reporting tool was again in AIR 13 to populate power costs for all Water assets in similar fashion to AIR 12. Those sites that have a new power connection have had 100% of the power costs included within Opex from Capex with other sites assessed based on changes in power cost.

Given the improvement to the data being used to report OPEX from CAPEX the resultant total OPEX from CAPEX is becoming more meaningful and during PC13 this should be more realistic.

M & G OPEX from CAPEX has been determined for the first time in AIR13 specifically linked to the PC10 project of office rationalisation.

Lines 20 – 21 - Grants, capital contributions and infrastructure charge receipts for new connections

Line 20 - Infrastructure charge receipts – new connections of £1.127m in Line 20 represents the total gross receipts for 2012/13 prior to the company applying the accounting policy for these. In the regulatory accounts part of the infrastructure receipt is deemed to apply to non-infrastructure enhancement of assets (2012/13 = 44.34%) and this element is not treated as a capital contribution toward infrastructure but is credited in the balance sheet to a deferred income account and is amortised over the average useful life of non-infrastructure assets (30 years).

Line 21 - Enhancement requisitions, grants and contributions comprise:

2012-13	£m
Water connections	1.717
Requisitions	0.314
Total line 21	2.031

- Total asset additions – Check to Table 25 line 5 col 4. For AIR 13 the reported numbers in these two tables are as follows:
Table 25 – £47.227m
Table 35 - £46.788m

The difference in the above 2 figures is explained as follows:

- PPP Alpha capital maintenance of █████ is not included in Table 35
- £-52k included in Table 25 relates to Decapitalised projects in 12/13.

Confidence Grades –CIDA allocation has made further progress in 2012/13 and whilst it is accepted there may be minor shortcomings these are few in number. With the allocation procedures, CIDA Masterclass training, CATPRAX development for storage and reporting as well as the reporting model all fully operational the Confidence grade has been maintained as B3 but being deemed close to 5% accuracy.

For OPEX as a result of CAPEX B4 has been assigned to all categories.

Confidence grades have not been assigned to the following:

- total opex as this is extracted from T21 where no confidence grades are applied
- Block I as this information is extracted from T42 where no confidence grades are applied.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 35A FINANCIAL MEASURES
WATER SERVICE - EXPENDITURE BY PURPOSE**

RPI Inflater (Operating Expenditure) base year to report year prices

1.17

COPI Inflater (Capital Expenditure) base year to report year prices

1.012

DESCRIPTION	UNITS	DP	1	2	3	4	5	
			PC10 PROJECTIONS FOR 2012-13	PC10 PROJECTIONS UPLIFTED FOR RPI AND COPI	ACTUAL 2012-13 OUTTURN	DIFFERENCE FROM PC10 FIGURES	% DIFFERENCE FROM PC10 FIGURES	DP
A BASE SERVICE PROVISION								
1 Base operating expenditure	£m	3	65.597	76.726	70.656	-6.070	-7.91	
2 Infrastructure renewals expenditure (net)	£m	3	19.010	19.232	22.514	3.282	17.07	
3 MNI (gross of grants and contributions)	£m	3	21.331	21.580	15.909	-5.671	-26.28	
4 MNI - grants and contributions	£m	3	0.000	0.000	0.000	0.000	0	
5 MNI (net of grants and contributions)	£m	3	21.331	21.580	15.909	-5.671	-26.28	
B QUALITY ENHANCEMENTS								
6 Capex - total quality enhancement programme	£m	3	14.884	15.058	9.972	-5.086	-33.78	
7 Opex - total quality enhancement programme	£m	3	0.116	0.136	0.786	0.651	479.74	
C ENHANCED SERVICE LEVELS								
8 Capital expenditure - customer service	£m	3	4.933	4.990	3.126	-1.864	-37.35	
9 Additional operating expenditure - customer service	£m	3	0.520	0.608	0.260	-0.348	-57.26	
D MAINTAINING AND IMPROVING SUPPLY/DEMAND BALANCE								
10 Capital expenditure supply/demand balance	£m	3	21.965	22.222	17.782	-4.440	-19.98	
11 Total enhancement capital contributions	£m	3	2.794	2.827	3.158	0.331	11.71	
12 Capex net of enhancement capital contributions	£m	3	19.171	19.395	14.624	-4.771	-24.6	
13 Additional operating expenditure supply/demand balance	£m	3	0.210	0.245	0.180	-0.065	-26.7	
14 Capital expenditure - security of supply	£m	3						
15 Additional operating expenditure - security of supply	£m	3						
E EXPENDITURE TOTALS								
16 Total gross capex - gross of grants (ire net) and excluding new outputs	£m	3	82.123	83.082	69.303	-13.779	-16.58	
17 Total opex excluding new outputs	£m	3	66.442	77.715	71.882	-5.833	-7.51	
18 Total gross capex - gross of grants (ire net) and including new outputs	£m	3	82.123	83.082	69.303	-13.779	-16.58	
19 Total opex including new outputs	£m	3	66.442	77.715	71.882	-5.833	-7.51	

Table 35a – Water Service – Expenditure comparisons by purpose

The PC10 Final Determination documentation provided to NI Water on February 10 did not provide the full transparency for the company to populate the Final Determination baseline on the Capital Investment Monitoring template or AIR Table 35a or 36a. The Utility regulator has provided additional information on 24/05/11 to populate the Capital lines of this table. These are fully reconciled to the Final Determination numbers for the Capex lines. The Final Determination numbers exclude the PPP Alpha Capital Maintenance.

There are some considerable variations in the CIDA allocations in 2010/11 compared to the PC10 Final Determination which is explained in detail below. This change follows reporter recommendations from 2009/10 and was highlighted to the Utility Regulator in a letter dated 19/05/11. For detailed variations at project level these are best examined on the CIM (table 40). The following commentary will give an explanation of some of the main variances.

New external constraints

It should be noted that the company is under additional external constraints since the Final Determination was published. These cannot be ignored from any comparative work and main factors are as follows:

- **Annual Funding** – NI Waters funding whilst presented in the Final Determination is now overwritten by the Public Expenditure funding which is allocated on an annual basis. This has affected NIW with initial budgets showing £20m greater than PC10 spend in 2011/12 of £205m (this has since been reduced to PC10 levels), and a reduction of £36m in 2012/13 against the PC10 budget. This revised PE budget has created a sawtooth investment profile and is presenting NI Water difficulty in managing the Capital Works Programme for 2012/13 in particular, as a significant portion of the spend in this year will be a result of projects started in 2011/12. This creates an inefficient approach for delivery of the programme as the company no longer has full control of the PC10 package.
- **Monitoring rounds** – In addition to the removal of any annual flexibility there is the additional complexity that the annual budgets will be subject to the in-year monitoring rounds which may reduce or increase funding. This approach to capital funding provides little opportunity to plan investment to follow the full Regulatory framework. This has been a particular issue in 2012/13 which is outlined within the general in year explanation below.
- **Governance Changes** - NIW has seen substantial and continuous changes in capital spend governance during the PC10 period. NI Water are required to comply with the guidance provided by CPD and the requirement of DRD re consultancy. The full impact of these changes is to extend the usual delivery time for a project over £2m by 6-12 weeks in reaching A3 stage. Smaller projects have proportionally smaller delays.

During the year 2010/11 NIW was issued with a range of governance circulars which have impacted on delivery. In the autumn restrictions were placed on the use of frameworks – which caused around 6-8 weeks delay in the water mains programme and other framework contracts until the guidance could be amended. In March 2011 guidance was issued on the use of external consultancy, requiring ministerial approval for all consultancy.

- **Delays in acceptance of the PC10 Final Determination** – The issues surrounding an NDPB negotiating a regulatory settlement with a regulator were exceptionally complex. Eventually a process and direction was agreed, which resulted in the Memorandum of Understanding between NIAUR and DRD, setting out some of the key principles. This allowed the overall PC10 settlement to be agreed by the NI Water board on the 13th December 2010 – 9 months after the start of the control period.
- **Reduced Capital Efficiency** – NIW began the procurement process for a series of major frameworks to replace extant and expired frameworks within the Capital Works Programme during 2011/12. This replaces the proposed Alliance delivery structure, which was adversely affected by the risks inherent in variation inherent in the Public Expenditure process and NIW's status as an NDPB. This reduces the available incentivisation for Alliance partners and eliminates the certainty of funding going forward which is essential for a commercial alliance to commit resources to the Alliance. The UR should note that the frameworks approach will not deliver the efficiencies seen in UK WASCs using Alliancing arrangements, but will satisfy the (current) NDPB requirements for governance.

General in year explanation of variation

- During 2012/13 the budget was revised with a transfer of £12m PE funding from the PC13 period into PC10 in September 2012. A further £5m was accepted in capital funding for 2012/13 after the submission of the revised PC13 submission Table 3.3. [REDACTED]
- The total increase in PE funding for the Capital Programme in the 2012/13 year was £13m. The timing of the additional investment in the second half the financial year posed a significant challenge for NI Water in the delivery of the Capital Programme.

Comparison issues

General Matters

The COPI factor of 1.012 has been derived from the information provided in the UR Chapter guidance. This figure is just above 1 due to deflation in the COPI index in the period 2009/10 – 2010/11 before returning to a positive index in 2011/12 and 2012/13.

It should be noted that provisional COPI figures for 2012/13 have since been released and the amended COPI factor is 1.018. This change would increase the total PC10 FD allowance in Column 2 by £0.5m. For this reason care should be taken when using this data.

Given that COPI is a combined set of indices from a number of industries, many of which has suffered significant declines due to the recession, NI Water does not accept the scale of the decline shown by COPI during 2009/10 and 2010/11 in respect of the Water Sector.

The MoU and CWA makes specific reference to COPI, stating that “The impact of COPI will be noted and monitored but no account taken of it until PC13 unless NI Water bring a bid forward for additional funding.” This element of the agreement is particularly relevant as the uncertainties around the funding available to NI Water and the level of investment that could be committed has meant that it has not been

possible for NI Water to move forward with the proposed Alliance for delivering the majority of the CWP.

For the above reason NI Water have applied a conversion factor of 1 from 07/08 base year for 2012/13 within Table 40 dashboard.

Figures reported in Columns 1 and 2 of this table are post efficiency.

PPP

No PPP is included in this table.

Line commentary

The follow line commentaries explain the variance between the PC10 FD 2007/08 prices converted to 2012/13 prices using actual COPI provided in the guidance against the actual expenditure in the year. Most of the analysis for this commentary has taken place in Table 40 and given that this table does not reconcile to the AIR table due to the approach adopted for reporting CIDA on the CIM (see Table 40 commentary for variances) the figures shown are an indicator of the magnitude of the variance.

Line 1 – Base operating expenditure

The figure for column 1 is populated using the NI Water PC10 Business plan split from Table B3.40 and Table B3.41. This gives a Water split of 50% for 2012/13.

This line is showing a reduced OPEX expenditure in 2012/13 and relates to the company becoming more efficient in respect of OPEX.

Line 2 – Infrastructure Renewals Expenditure (net)

This line is showing an increased expenditure in 2011/12 and 2012/13 compared to PC10 FD projected expenditure in nominal prices using actual COPI. This is mainly due to an increase in watermain rehabilitation work completed in 2011/12 to ensure PE targets were achieved in 2011/12. This had a carry forward impact in 2012/13. In completing this investment additional watermain outputs were delivered over the PC10 period. In addition the proportional allocation of spend to 'B' has increased over the 2011/12 and 2012/13 years when the Watermain rehab programme is examined at sub-Programme level.

In addition a change in CIDA allocation following the 'Reporter recommendations in AIR10 is impacting on this area. In accordance with the Water Resource Management Plan (WRMP), certain trunk mains are being laid to remove existing Water Treatment works (WTW). In these cases, a non infrastructure asset (WTW) is being replaced with an infrastructure asset (Trunk Main). The Reporter recommended that when an asset is being replaced, Base Maintenance is included in the CIDA allocation of the replacement asset. This is documented in the reporters report for AIR10 Table 32 with the following points being made:

- a) *'there is a general under allocation to Base Maintenance (B), as demonstrated in the Reporter's QBEG for schemes reviewed'*
- b) *JG036 – a recommended increase in B allocation from 2% to 31% for the project.*

However the QBEG recommended by the reporter does not discuss the infrastructure / non infrastructure implications of the change. In the case of project JG036 (Castor Bay to Dungannon), CIDA now reflects a Base allocation of 31% which is split 4% non infrastructure (associated with the Water Pumping station) and

27% infrastructure (associated with the new Trunk Main). The 27% infrastructure base allocation has a direct impact on IRE despite the fact that no maintenance took place on the infrastructure asset. The increase in maintenance spend did not maintain the network; rather it extended the network and should therefore be allocated to Enhancement categories only.

This had the effect of increasing the Water Infrastructure base allocation for the project JG036 by c£1.33m against the FD allocation in 2010/11 and means that the PC10 IRE allocation cannot be directly compared with the current allocations. It also means that the PC10 IRE funding will not cover these changes.

Line 3 – MNI (Gross of grants and contributions)

This line reports a reduction (-£5.7m) on the PC10 target. This is due to:

- a) WTW's were not considered as requiring all the available funding due to the age of these assets within the maintenance cycle. The company's focus in 2012/13 has been upon WWTW's
- b) Due to procurement delays there has been no work completed on Reservoir Rehabilitation during 2012/13. This will commence again in 2013/14.

Line 7, 9 & 13 – OPEX from Capex

The combined total of these lines is showing increased OPEX from CAPEX in 2012/13 compared to the Final Determination. This is the first year that OPEX from CAPEX has exceeded the FD estimate.

It should be noted that the process of capturing Opex data has improved with the introduction of the 'Cost to Serve' project. Power data is now available by site linked to CAR ID and work is ongoing to include further costs by location.

Line 6 - Capex - Total Quality Enhancement Programme

The quality enhancement (Q) programme spent less than the PC10 projection in 2012/13. The variance of -£5.0m spend in this programme is mainly attributed to the fact that the PC10 FD 'Quality' funding at Killylane WTW is no longer required as was removed as part of the PE10 submission. The Study has determined that Base Maintenance investment will be sufficient to correct the issues on this site.

Line 8 – Capital expenditure-customer service

The variance on this programme of -£1.9m in 2012/13 is primarily due to a reduced M & G programme being delivered during PC10.

Line 10 – Supply/ Demand Balance

It is difficult to analyse these lines separately. In summary there are 4 main variances as follows:

- c-£1.0m (T40 analysis) has been spent on Trunk Watermains in 2012/13 which relates to advancement of Ballydugan to Newry Main link reinforcement Phase 2 earlier in 2011/12 resulting in less spend in 2012/13.
- c-£4.4m (T40 analysis) reduced spend on Reservoirs. Some of the PC10 nominated Reservoirs are being delayed to PC13/15.
- c-£3.8m (T40 analysis) reduced spend on SDB within the watermain rehab sub programme.
- c-£2.6m (T40 analysis) which relates to additional spend on the laying of watermains for new developments.

Line 16 - Total Gross Capex - Gross of Grants (IRE Net) and Excluding New Outputs

The total PC10 Water predicted expenditure as per the table is £83.1m in 12/13 prices. The actual expenditure was £69.3m.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 36 FINANCIAL MEASURES
SEWERAGE SERVICE - EXPENDITURE BY PURPOSE

DESCRIPTION	UNITS	DP	1		2		3		4		5		6		
			REPORTING YEAR	CG	REPORTING YEAR	CG	REPORTING YEAR	CG	REPORTING YEAR	CG	REPORTING YEAR	CG	REPORTING YEAR	CG	
			2007-08		2008-09		2009-10		2010-11		2011-12		2011-12		
A BASE SERVICE PROVISION															
1	Base operating expenditure	£m	3	87.703	B4	107.531	B4	95.090	B4	71.339	B4	69.345	B4	71.112	B4
2	Infrastructure renewals expenditure (net)	£m	3	6.195	B3	6.600	B2	11.494	B3	6.342	B3	9.044	B3	8.609	B3
3	MNI (gross of grants and contributions)	£m	3	23.297	B3	27.838	B2	30.102	B3	23.058	B3	48.006	B3	41.258	B3
4	MNI - grants and contributions	£m	3	0.000		0.000	B2	0.000	n/a	0.000	n/a	0.000	n/a	0.000	n/a
5	MNI - net of grants and contributions	£m	3	23.297	B3	27.838	B2	30.102	B3	23.058	B3	48.006	B3	41.258	B3
6	Infrastructure renewals expenditure (gross)	£m	3	6.195	B3	6.600	B2	11.494	B3	6.342	B3	9.044	B3	8.775	B3
B QUALITY ENHANCEMENTS															
7	Capex - total quality enhancement programme	£m	3	49.426	B3	79.419	B2	62.880	B3	29.753	B3	28.730	B3	21.626	B3
8	Opex - total quality enhancement programme	£m	3	0.096	B4	1.028	B4	1.413	B4	0.129	B4	0.276	B4	0.351	B4
C ENHANCED SERVICE LEVELS															
9	Capital expenditure - customer service	£m	3	49.691	B3	28.209	B2	20.002	B3	6.876	B3	4.251	B3	2.899	B3
10	Additional operating expenditure - customer service	£m	3	0.000	B4	0.044	B4	0.338	B4	0.002	B4	0.005	B4	0.239	B4
D IMPROVING SUPPLY/DEMAND BALANCE															
11	Capital expenditure supply/demand balance	£m	3	45.287	B3	44.230	B2	31.723	B3	22.238	B3	17.914	B3	18.318	B3
12	Capex - new development	£m	3	19.875	B3	38.339	B3	28.642	B3	22.078	B3	16.950	B3	17.871	B3
13	Capex - growth - sewage	£m	3			5.834	B3	2.777	B3	0.157	B3	0.504	B3	0.342	B3
14	Capex - growth - sewage treatment	£m	3			0.057	B3	0.304	B3	0.003	B3	0.459	B3	0.105	B3
15	Additional operating expenditure supply/demand balance	£m	3	0.596	B4	0.489	B4	0.968	B4	0.099	B4	0.099	B4	0.411	B4
E NEW OUTPUTS/OBLIGATIONS SINCE THE SBP															
16	New outputs/obligations - capex	£m	3	0.000	B3	0.000	B3	0.220	B3	0.000	B3	0.000	B3	0.000	B3
17	New outputs/obligations - opex	£m	3	0.000	B4	0.000	B2	0.000	B4	0.000	B4	0.000	B4	0.000	B4
F GRANTS, CAPITAL CONTRIBUTIONS AND INFRASTRUCTURE CHARGES RECEIPTS FOR NEW CONNECTIONS															
18	Infrastructure charge receipts - new connections	£m	3	1.132		1.164	A2	1.029	A2	1.153	A2	0.897	A2	0.911	A2
19	Enhancement requisitions, grants and contributions	£m	3	0.124		0.759	A2	1.253	A2	2.029	A2	1.696	A2	1.443	A2
G ADOPTED ASSETS, NIL COST ASSETS															
20	Assets adopted or acquired at nil cost	£m	3	19.859	B3	19.284	B3	18.602	B3	46.237	B3	48.034	B3	48.233	B3
H EXPENDITURE TOTALS															
21	Total operating expenditure	£m	3	88.395		109.092	B2	97.808	n/a	71.569	n/a	69.725	n/a	72.113	n/a
22	Infrastructure renewals expenditure (net)	£m	3	6.195	B3	6.600	B2	11.494	B3	6.342	B3	9.044	B3	8.609	B3
23	Total asset additions	£m	3	187.560	B3	198.980	B2	163.529	B3	128.162	B3	146.936	B3	132.334	B3
24	Total enhancement capital contributions	£m	3	1.256	B3	1.923	B2	2.282	B3	3.182	B3	2.593	B3	2.354	B3
25	Total capital expenditure (excluding adopted and nil cost assets)	£m	3	173.896	B3	186.296	B2	156.420	B3	88.267	B3	107.946	B3	92.709	B3
I CAPITAL ELEMENT OF PPP UNITARY CHARGE PAYMENT															
26	Base maintenance (infrastructure and non-infrastructure)	£m	3					0.000	n/a	0.000	n/a	0.000	n/a	0.000	n/a
27	Quality enhancement expenditure	£m	3					0.000	n/a	0.000	n/a	0.000	n/a	0.000	n/a
28	Enhanced service level expenditure	£m	3					0.000	n/a	0.000	n/a	0.000	n/a	0.000	n/a
29	Supply demand balance expenditure	£m	3					0.000	n/a	0.000	n/a	0.000	n/a	0.000	n/a
30	New outputs/obligations since the SBP	£m	3					0.000	n/a	0.000	n/a	0.000	n/a	0.000	n/a
31	Total capital element of PPP unitary charge payment	£m	3					0.000	n/a	0.000	n/a	0.000	n/a	0.000	n/a

Table 36 - Sewerage Service – Expenditure by purpose

Capital expenditure (Capex)

In 2012/13 NIW invested £92.7m (excluding adopted and nil cost assets) of capital expenditure in sewerage service activities and outputs. Investment has been allocated to purpose categories in line with the methodology as outlined in Chapter 34. Detailed explanations of the expenditure and achievements are set out by purpose category below.

Capex: base service provision – infrastructure renewals

In 2012/13 NIW invested £8.6m (net) in sewerage service infrastructure renewals. In spending the 2012/13 investment the company has:

- Replaced sewers primarily within Drainage Area Plan projects.
- Addressed blockages, collapses etc which lead to flooding incidents.
- Diverted network assets where necessary.

NIW have been targeting Capital Maintenance activity during 2012/13 on both Critical and non-critical sewers in line with findings from the Drainage Area Studies.

Capex: base service provision – maintenance non- infrastructure

In 2012/13 NIW invested £41.2 million (net) in the maintenance of non-infrastructure assets.

In doing so the company has:

- Completed projects at wastewater treatment works. These are quality driven projects but some contain a Base Service Provision apportionment within CIDA.
- Invested approximately £5.5 million in Management and General Activities to maintain non-operational assets included operational fleet, office rationalisation & IT Projects.
- Continued to develop a focused programme of work specifically focused on Base Maintenance at WwTW sites. £9.1m expenditure was concentrated at the following sites:
 - i. Ballymena WwTW (KB460)
 - ii. North Coast WwTW (KC446)
 - iii. Belfast WwTW. (KR485, KR530)
 - iv. Strabane WwTW (KN631)
 - v. Rasharkin WwTW (KC429)
 - vi. Dunloy WwTW (KC430)
 - vii. Ballyclare WwTW (KA242)
 - viii. Moy WwTW (KF370)
 - ix. Redford WwTW (KF368)
 - x. Culmore WwTW (KL508)
 - xi. Lisnaskea WwTW (KP679)
 - xii. Feeny WwTW (KL496)
 - xiii. Tobermore WwTW (KL485)
 - xiv. Whitehouse WwTW (KR486)
- In addition to the above list a further £4m was invested at smaller WwTW across Northern Ireland via the CWP.
- Focused projects on particular process elements have commenced across a number of sites including PLC Robustness and Aeration optimisation.

- Operations Directorate invested £8.0m replacing sewerage non-infra assets across the business a large portion which will be reactive maintenance.

Capex: quality enhancements

In 2012/13 NIW invested £21.6 million in sewerage service quality programmes. In doing so the company has:

- continued the small WwTW programme in 2012/13 investing £0.4m in quality enhancement.
- completed 1 SBP carry over project (STW/025) in 2012/13. The only remaining SBP carryover project remaining as not complete is Ardglass WwTW which is currently under construction. Within sub-programme 16 (STW/032 – STW/043) five nominated outputs were complete during the year. With the exception of Ballintoy WwTW all other WwTW's in this sub-programme have either been completed or are currently under construction.
- Completed 4 of the additional outputs which were listed within the original monitoring plan post the PC10 final determination. The Drumaness WwTW project nominated as part of the additional outputs programme was completed in 2010/11 but not claimed in previous years. A further 5 WwTW Quality projects (41 -45) were completed during PC10 which were not included as part of the monitoring plan area also claimed in 2012/13. A number of these were actually completed in earlier years.

Table 1 summarises all the nominated outputs during PC10 and the projects completed and a brief summary of those not yet completed. Taking account of 11 WwTW's, with Population Equivalents greater than 250, which were completed in PC10 as part of the Small WwTW's a total of 56 WwTW's were completed in PC10 which is a success given the reduced PC10 funding envelope that materialised over PC10.

Table 1: WwTW Nominated outputs progress

	Nominated outputs reference	Project Code	Project title	Year claimed	Outstanding outputs
	STW/001	KS225	Ardglass		Under construction. Completion target 2014/15
1	STW/002	KR389	Ballyhalbert WwTW	2011/12	
2	STW/003	KL393	Ballymonie WwTW	2010/11	
	STW/004	KR388	Ballywalter WwTW	SBP completion	
3	STW/005	KC299	Bushmills and Portballintrae WwTW	2010/11	
4	STW/006	KB333	Cargan WwTW	2010/11	
5	STW/007	KC284	Cloughmills WwTW	2010/11	
6	STW/008	KB284	Coagh WwTW	2010/11	
7	STW/009	KF005	Coalisland WwTW	2010/11	

	Nominated outputs reference	Project Code	Project title	Year claimed	Outstanding outputs
8	STW/010	KS224	Downpatrick WwTW	2010/11	
9	STW/011	KT102	Dunmurry WwTW	2011/12	
	STW/012	KP299	Enniskillen WwTW	SBP completion	
10	STW/013	KL363	Feeny WwTW	2011/12	
11	STW/014	KT125	Hooks Corner WwTW	2010/11	
	STW/015	KR313	Lisbarnet WwTW	SBP Completion	
12	STW/016	KS307	Loughries WwTW	2010/11	
13	STW/017	KF064	Lurganare WwTW	2010/11	
14	STW/018	KB281	Maghera WwTW	2010/11	
15	STW/019	KB282	Magherafelt WwTW	2010/11	
	STW/020	KA158	Milltown Antrim WwTW	SBP completion	
16	STW/021	KB278	Money more WwTW	2010/11	
	STW/022	KF012	Moygashel WwTW	SBP completion	
17	STW/023	KA195	Mullaghboy WwTW	2011/12	
18	STW/024	KR310	Newtownbreda WwTW	2010/11	
19	STW/025	KR391	Portavogie Interim solution	2012/13	
20	STW/026	KN533	Rousky Sewerage Scheme	2010/11	
	STW/027	KS263	Saintfield WwTW	SBP completion	
21	STW/028	KB279	Stewartstown WwTW	2010/11	
22	STW/029	KB269	Toome (Creagh) Sewerage Scheme	2010/11	
23	STW/030	KB436	Whitehead, Ballystrudder and Ballycarry Rationalisation	2011/12	
24	STW/031	KF320	Bush WwTW	2010/11	
	STW/032	KL350	Benone WwTW		Under Construction. Completion target 2013/14

	Nominated outputs reference	Project Code	Project title	Year claimed	Outstanding outputs
	STW/033	KB459	Maghera WwTW		Under Construction. Completion Target 2014/15
	STW/034	KS848	Newcastle WwTW		Under Construction. Completion target 2013/14
	STW/035	KB314	Gulladuff WwTW		Under Construction. Completion Target 2014/15
	STW/036	KC302	Ballintoy WwTW		Lands purchased. Awaiting planning permission PC15 completion.
25	STW/037	KC416	Glenstall WwTW	2012/13	
26	STW/038	KT377	New Holland WwTW	2010/11	
27	STW/039	KN622	Omagh WwTW	2012/13	
28	STW/040	KV045	Mullaghbane WwTW	2012/13	
29	STW/041	KV125	Forkhill WwTW	2012/13	
	STW/042	KT114	Hillsborough WwTW		Under Construction. Completion target 2013/14
30	STW/043	KL465	Limavady WwTW	2012/13	
31	STW/045	KS384	Darragh Cross WwTW	2010/11	
	STW/046	KC296	Ballycastle WwTW		Delayed due to Land acquisition.
	STW/047	KS235	Ballygowan WwTW		Delayed due to land acquisition.
	STW/048	KS389	Ballymartin and Blackrock WwTW's		Completion Target 2014/15

	Nominated outputs reference	Project Code	Project title	Year claimed	Outstanding outputs
	STW/049	KS355	Ballynahinch WwTW		Under Construction. Completion target 2013/14
32	STW/050	KF060	Brockagh Terrace/Mountjoy WwTW	2012/13	
33	STW/051	KC338	Causeway Aird	2011/12	
34	STW/052	KS253	Drumaness WwTW	*2012/13	
35	STW/053	KS857	Glassdrumman WwTW	2011/12	
36	STW/054	KF028	Keady WwTW	2012/13	
	STW/055	KR409	Moneyreagh WwTW		Under Construction. Completion target 2013/14
37	STW/056	KV105	Newry WwTW	2012/13	
	STW/057	KT126	Stoneyford WwTW		PC13 Completion Target. Developing Sustainable Solution.
38	STW/058	KB287	Swatragh WwTW	2012/13	
39		KS216	Dunmore Sewerage – EC compliance	2011/12	
40		KF329	Ardrass WwPS (including Ardrass WwTW)	2011/12	
41		KL482	Tamnaherin WwTW	2012/13	
42		KF319	Annaghmore WwTW	*2012/13	
43		KG145	Derrytrasna WwTW	*2012/13	
44		KL300	Dungiven WwTW	*2012/13	
45		KB322	Martinstown WwTW	*2012/13	
46	Sub-prog 17		Annaghugh WwTW	2010/11	
47	Sub-prog 17		Glabally WwTW	2010/11	
48	Sub-prog 17		Garvaghy WwTW	2012/13	

	Nominated outputs reference	Project Code	Project title	Year claimed	Outstanding outputs
49	Sub-prog 17		Monteith WwTW	2011/12	
50	Sub-prog 17		Donagheady WwTW	2010/11	
51	Sub-prog 17		Orritor WwTW	2011/12	
52	Sub-prog 17		Maghery WwTW	2010/11	
53	Sub-prog 17		Attical Tullyframe WwTW	2011/12	
54	Sub-prog 17		Donagh WwTW	2011/12	
55	Sub-prog 17		Teemore WwTW	2011/12	
56	Sub-prog 17		Glack WwTW	2012/13	

*completed in earlier years but not claimed

Table 2: UID Nominated outputs progress

Sort ref	Nominated outputs reference	Project Code	Project title	Year claimed
1	UID/024	KS878	Bangor DAP – Sandell lane WwPS CSO	2011/12
2	UID/025	KS878	Bangor DAP – Coastguard lane WwPS CSO	2011/12
3	UID/188	KS878	Bangor DAP – Seacliff Road CSO 21	2011/12
4	UID/029	KR440	Ballywalter DAP Stage 1 – Main Street CSO	2010/11
5	UID/030	KR432	Belfast (Beechmount Avenue Gortfin Street Hydraulic upgrade) - CSO 53	2011/12
6	UID/118	KR432	Belfast (Beechmount Avenue Gortfin Street Hydraulic upgrade) - CSO 46	2011/12
7	UID/119	KR432	Belfast (Beechmount Avenue Gortfin Street Hydraulic upgrade) - CSO 47	2011/12
8	UID/120	KR432	Belfast (Beechmount Avenue Gortfin Street Hydraulic upgrade) - CSO 50 - Fort Street	2011/12
9	UID/034	KV014	Castlewellan Park CSO	2012/13
10	UID/035	KV014	Castlewellan WwTW (Storm Tanks)	2012/13
11	UID/039	KC404	Coleraine (DAP Phase 1) – Queens St CSO 02a	2011/12
12	UID/042	KC404	Coleraine (DAP Phase 1) - Strand Road PS ERO PS 02a	2011/12
13	UID/121	KC404	Coleraine (DAP Phase 1) - Rose Gardens CSO	2011/12
14	UID/122	KC404	Coleraine (DAP Phase 1) - Millburn Road CSO	2011/12
15	UID/123	KC404	Coleraine (DAP Phase 1) - Andersons Park CSO	2011/12

16	UID/051	KR441	East Belfast (Loop Interceptor sewer from east Belfast) – All Alexander Road CSO 21	2011/12
17	UID/055	KR441	East Belfast (Loop Interceptor sewer from east Belfast) - Carnamena Avenue CSO 28	2011/12
18	UID/160	KR441	East Belfast (Loop Interceptor sewer from east Belfast) - Clonduff Drive CSO 29	2011/12
19	UID/161	KR441	East Belfast (Loop Interceptor sewer from east Belfast) - Merok Crescent CSO 27	2011/12
20	UID/062	KS812	Greyabbey CAP Phase 1	2012/13
21	UID/063	KS812	Greyabbey CAP Phase 1	2012/13
22	UID/064	KS807	Killkeel Harbour WWPS and Sewerage Improvements: Killkeel Harbour WWPS	2012/13
23	UID/277	KS807	Killkeel Harbour WWPS and Sewerage Improvements: Killkeel Harbour WWPS	2012/13
24	UID/075	KR439	Millisle DAP Stage 2 CSO 1	2012/13
25	UID/077	KS379	Newcastle (Murlough SPS Upgrade & Network Improvements) - Bonnys caravan CSO14	2011/12
26	UID/128	KS379	Newcastle (Murlough SPS Upgrade & Network Improvements) - Murlough SPS CSO 21	2011/12
27	UID/129	KS379	Newcastle (Murlough SPS Upgrade & Network Improvements) - Burrendale hotel CSO 03	2011/12
28	UID/130	KS379	Newcastle (Murlough SPS Upgrade & Network Improvements) - Burrendale hotel No 1 CSO 02	2011/12
29	UID/131	KS379	Newcastle (Murlough SPS Upgrade & Network Improvements) - Mourneview CSO 04	2011/12
30	UID/132	KS379	Newcastle (Murlough SPS Upgrade & Network Improvements) - Burrenview CSO 05	2011/12
31	UID/133	KS379	Newcastle (Murlough SPS Upgrade & Network Improvements) - Shan Slieve Drive CSO 15	2011/12
32	UID/134	KS379	Newcastle (Murlough SPS Upgrade & Network Improvements) - South Promenade CSO 18	2011/12
33	UID/078	KS377	Newcastle (Down Road/castle Park Sewer upgrade/attenuation) – Downs road CSO	2011/12
34	UID/135	KS377	Newcastle (Down Road/castle Park Sewer upgrade/attenuation)-Castle Park WwPS CSO13	2011/12
35	UID/136	KS377	Newcastle (Down Road/castle Park Sewer upgrade/attenuation) – Valenta Place CSO 11	2011/12
36	UID/137	KS377	Newcastle (Down Road/castle Park Sewer upgrade/attenuation) – Castle Park CSO 12	2011/12

37	UID/079	KS835	South Street WWPS, Newtownards	2012/13
38	UID/087	KG184	Portadown Drainage Area Network Improvements: Obins Street and Park Road: Obins Street CSO 25	2012/13
39	UID/088	KG184	Portadown Drainage Area Network Improvements: Obins Street and Park Road: Obins Street CSO 24	2012/13
40	UID/138	KG184	Portadown Drainage Area Network Improvements: Obins Street and Park Road: Railway Station/Park Road	2012/13
41	UID/089	KG184	Portadown Drainage Area Network Improvements: Obins Street and Park Road: Obins Street/Park Road	2012/13
42	UID/096	KR434	Belfast (Annadale flats Belfast hydraulic upgrades) - CSO 73 - Annadale flats	2011/12
43	UID/097	KR434	Belfast (Annadale flats Belfast hydraulic upgrades) - CSO 72 - Sunnyside street	2011/12
44	UID/140	KR434	Belfast (Annadale flats Belfast hydraulic upgrades) - Annadale SPS - CSO closure	2011/12
45	UID/141	KR434	Belfast (Annadale flats Belfast hydraulic upgrades) - Sunnyside street SPS CSO upgrade	2011/12
46	UID/098	KB428	Draperstown DAP – Derrynoyd CSO 02	2010/11
47	UID/099	KB428	Draperstown DAP – Derrynoyd CSO 01	2010/11
48	UID/100	KL428	Londonderry Sewer Imps Stage 2 Duke street RAB CSO 28	2010/11
49	UID/101	KL428	Londonderry Sewer Imps Stage 2 Duncreggan Road CSO 29	2010/11
50	UID/102	KL428	Londonderry Sewer Imps Stage 2 Dunfield Terrace CSO 30	2010/11
51	UID/103	KL443	Londonderry (sewer impms stage 2 Duke St PS group schemes) - Fountain Hill CSO 31	2011/12
52	UID/104	KL443	Londonderry (DAP Duke street work package) – Queens Quay WWPS CSO 14	2011/12
53	UID/105	KL443	Londonderry (DAP Duke street work package) - Duke street storm PS CSO63/PS 24	2011/12
54	UID/106	KL443	Londonderry (DAP Duke street work package) - Duke street 1 PS CSO CSO 41	2011/12
55	UID/107	KL445	Londonderry (DAP Victoria road work package) - Victoria road PS CSO 13	2010/11
56	UID/108	KL445	Londonderry (DAP Victoria road work package) – Victoria Road Strom WWPS	2012/13
57	UID/142	KL448	Londonderry (DAP Victoria road work package) – Prehen Park CSO 47	2010/11
58	UID/143	KL448	Londonderry (DAP Victoria road work package) – Prehen Road CSO 46	2010/11

59	UID/162	KL448	Londonderry (DAP Victoria road work package) –Sunningdale Drive CSO 53	2010/11
60	UID/109	KL446	Londonderry (DAP Duke street work package Flood alleviation) - King street RAB CSO 35	2011/12
61	UID/110	KL446	Londonderry (DAP Duke street work package Flood alleviation) - Victoria Road(new) CSO 57	2011/12
62	UID/111	KL446	Londonderry (DAP Duke street work package Flood alleviation) - Victoria Road (old) CSO 58	2011/12
63	UID/112	KL449	Londonderry (DAP Strathfoyle & Drumahoe work package Drumahoe old PS) - PS CSO 07	2010/11
64	UID/113	KL450	Londonderry (DAP Strathfoyle & Drumahoe work package CAW PS) - CAW PS CSO 05	2010/11
65	UID/115	KG153	Portadown (Gilford Road Portadown Sewerage upgrades) - Gilford road CSO	2010/11
66	UID/116	KG153	Portadown (Gilford Road Portadown Sewerage upgrades) - Princess way CSO	2010/11
67	UID/117	KG153	Portadown (Gilford Road Portadown Sewerage upgrades) - Eden Avenue SPS CSO	2010/11
68	UID/127	KT138	Beechlawn WwPS Hillsborough	2011/12
69	UID/144	KR452	Baroda Street/Ormeau Park, Belfast CSO – Baroda Street CSO 77	2011/12
70	UID/145	KR452	Baroda Street/Ormeau Park, Belfast CSO –Ormeau Park CSO 78	2011/12
71	UID/146	KL477	Londonderry DAP: Foyle Road Work Package:CSO Rationalisation – Lower Bennett Street CSO	2012/13
72	UID/147	KL477	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation – Moat Street CSO	2012/13
73	UID/148	KL477	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation – Bridge Street CSO	2012/13
74	UID/149	KL477	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation – John Street CSO	2012/13
75	UID/150	KL477	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation – Lone Moor Street CSO1	2012/13
76	UID/151	KL477	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation – Lone Moor Street CSO2	2012/13
77	UID/152	KL477	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation – Lone Moor Street CSO3	2012/13
78	UID/153	KL477	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation – Letterkenny Road WWPS	2012/13

79	UID/154	KL477	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation – Foyle Road WWPS	2012/13
80	UID/155	KL477	Londonderry DAP: Foyle Road Work Package: CSO Rationalisation – Cashowen CSO	2012/13
81	UID/159	KA201	Ballyeaston, Sewage System Upgrade	2011/12
82	UID/163	KR402	Joymount WwPS	2010/11
83	UID/164	KR403	Whitehouse DAP Phase 1 – Camross Park CSO	2010/11
84	UID/165	KR403	Whitehouse DAP Phase 1 – Merville Mews CSO	2010/11
85	UID/166	KR403	Whitehouse DAP Phase 1 – Manse Road CSO	2010/11
86	UID/174	KR400	Lukes Point DAP Phase 1 – Lukes Point WwPS	2010/11
87	UID/156	KL451	Londonderry DAP: Strathfoyle & Drumahoe Work Package: Cambourne Park CSO	2012/13
88	UID/157	KL451	Londonderry DAP: Strathfoyle & Drumahoe Work Package: Rosstown Road CSO	2012/13
89	UID/158	KL451	Londonderry DAP: Strathfoyle & Drumahoe Work Package: Fallowlea Park CSO	2012/13
90	UID/178	KG178	Annaghanoon WwPS	2012/13
91	UID/235	KL444	Londonderry DAP: Buncrana Road Work Package – Racecourse Road CSO	2012/13
92	UID/236	KL444	Londonderry DAP: Buncrana Road Work Package – Buncrana Road CSO	2012/13
93	UID/249	KN595	Brookmount Road, Hunters Crescent Sewer replacement: 21 Clontarf Drive CSO	2012/13
94	UID/250	KN595	Brookmount Road, Hunters Crescent Sewer replacement: Tamlaght Road CSO	2012/13
95	UID/251	KN595	Brookmount Road, Hunters Crescent Sewer replacement: Creevenagh Road WWPS	2012/13
96	UID/270	KN595	Brookmount Road, Hunters Crescent Sewer replacement: Hunters Crescent WWPS	2012/13
97	UID/271	KN595	Brookmount Road, Hunters Crescent Sewer replacement: 4 Lambrook Gardens SCO	2012/13
98	UID/252	KV159	Horners Lane CSO	2012/13
99	UID/262	KV063	Dublin Road CSO	2012/13
100	UID/278	KS379	Murlough WWPS	2012/13
101	UID/244	KN646	Winters Lane CSO	2012/13

Notes

- Rows in bold claimed in 2012/13
- UID ref shown in **Green** additional UID's identified in monitoring plan
- UID ref shown in **Red** are additional UID's not identified in PC10 or the monitoring plan.

- d) UID ref shown in **Blue** are additional UID's originally defined as PC13 nominated outputs brought forward.

Line 16 - Capex: New Obligations

There are no new obligations reported in 2012/13. All funding for the additional outputs sub programme are included in sections A, B, C & D of the table.

Line 1 - Opex: Base Service Provision

The Opex in Base Service provision is taken as the Total Base Opex from Table 21 (excluding PPP unitary payments) minus the Opex from Capex calculated for Enhancements.

Lines 2-6 - Base Service Provision: IRE and MNI

IRE

In 2012/13 £166k was received for the diversion of sewers. This is included on line 6.

MNI

There are no contributions or grants for non infrastructure base projects in 2012/13.

Thus MNI gross and MNI net are the same - lines 3 and 5 and line 4 – MNI grants and contributions is zero.

OPEX from CAPEX

OPEX from CAPEX has been calculated directly from the accounting general ledger for those sites identified as becoming operational between 2010/11 and 2012/13. A direct comparison has been completed on a site by site basis of expenditure on the relevant sites pre and post CAPEX investment. After adjusting for inflationary rises the difference is recorded as Opex from Capex.

Small WWTW's do not have individual representation on the General ledger. One of the Business Improvement projects (Cost to Serve) became operational during the 2010/11 financial year and is being further developed to capture all costs associated with individual sites. For AIR 13 we continue to report primarily Opex from Capex on the smaller sites on power costs alone (e.g. SPS sites). Through 'Cost to Serve' all power costs have been allocated to assets. This reporting tool was used to populate power costs for all WWTW's in AIR13 and in some cases also include other direct costs including chemicals, materials and contractors, which is a further development on 2012/13 when the CAR ID's were not available on 'Cost of Serve'. Those sites that have had a new power connection have had 100% of the power costs included within Opex from Capex with other sites assessed based on changes in power cost.

It should be noted that in some cases the entire OPEX is treated as OPEX from CAPEX as the assets are entirely new. Examples include assets adopted and WWTW's where no form of treatment was provided before. As the OPEX has been taken straight from the general ledger these costs will only relate to the portion of the year that the site is operational and therefore no apportionment is required. However there remain some pumping stations for which it has not been possible to separately identify power costs, in particular those that have been adopted in the year. There is a time lag between adoption and the first power being billed.

Apportionment within the Table has been completed in accordance with CIDA apportionments to ENHANCEMENT. A separate spreadsheet has been developed to

analyse these smaller number of projects using the CIDA ENHANCEMENT outputs (rebalanced to 100%) from the original Capital project to apportion the OPEX from CAPEX.

Given the improvement to the data being used to report OPEX from CAPEX the resultant total OPEX from CAPEX is becoming more meaningful and during PC13 this should be more realistic.

M & G OPEX from CAPEX has been determined for the first time in AIR13 specifically linked to the PC10 project of office rationalisation.

Grants, capital contributions and infrastructure charge receipts for new connections (lines

Line 18 - Infrastructure charge receipts – new connections of £0.911m in Line 18 represents the total gross receipts for 2012/13 prior to the company applying the accounting policy for these. In the statutory accounts part of the infrastructure receipt is deemed to apply to non-infrastructure enhancement of assets (2012/13 = 44.34%) and this element is not treated as a capital contribution toward infrastructure but is credited in the balance sheet to a deferred income account and is amortised over the average useful life of non-infrastructure assets (30 years).

Line 19 - Enhancement requisitions, grants and contributions

These comprise:

2012/13	£m
Sewers for adoption – inspection fees	0.486
Requisitions	0.533
Sewerage connections	0.424
Total line 19	1.443

Confidence Grades – CIDA allocation has made further progress in 2012/13 and whilst it is accepted there may be minor shortcomings these are very few in number. With the allocation procedures, CIDA Masterclass training, CAPTRAX development for storage and reporting as well as the reporting model all fully operational the Confidence grade has been maintained as B3 but being deemed close to 5% accuracy.

For OPEX as a result of CAPEX B4 has been assigned to all categories.

Confidence grades have not been assigned to the following:

- a) Total opex as this is extracted from T21 where no confidence grades are applied.
- b) Block I as this information is extracted from T42 where no confidence grades are applied.

Total asset additions – Check to Table 25 line 5 col 8. For AIR 13 the reported numbers in these two tables are as follows:

Table 25 – £135.442m

Table 36 - £132.334m

The difference in the above 2 figures is explained as follows:

- a) £3.303m relates to the Residual interest on Kinnegar PPP and OMEGA projects, which is not included on Table 36.
- b) £-194k included in Table 25 relates to De-capitalised projects in 12/13.

Health and Safety

Health and Safety Expenditure has been allocated to Base Service Provision.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 36A FINANCIAL MEASURES
SEWERAGE SERVICE - EXPENDITURE BY PURPOSE**

RPI Inflation (Operating Expenditure) base year to report year prices

1.170

COPI Inflation (Capital Expenditure) base year to report year prices

1.012

DESCRIPTION	UNITS	DP	1	2	3	4	5	
			PC10 PROJECTIONS FOR 2012-13	PC10 PROJECTIONS UPLIFTED FOR RPI AND COPI	ACTUAL 2012-13 OUTTURN	DIFFERENCE FROM PC10 FIGURES	% DIFFERENCE FROM PC10 FIGURES	
						DP	2	
A BASE SERVICE PROVISION								
1	Base operating expenditure	£m	3	66.124	77.342	71.112	-6.230	-8.06
2	Infrastructure renewals expenditure (net)	£m	3	10.372	10.493	8.609	-1.884	-17.96
3	MNI (gross of grants and contributions)	£m	3	32.915	33.300	41.258	7.958	23.90
4	MNI - grants and contributions	£m	3	0.000	0.000	0.000	0.000	0.00
5	MNI (net of grants and contributions)	£m	3	32.915	33.300	41.258	7.958	23.90
B QUALITY ENHANCEMENTS								
6	Capex: Total quality enhancement programme	£m	3	37.868	38.310	21.626	-16.685	-43.55
7	Opex: Total quality enhancement programme	£m	3	1.007	1.177	0.351	-0.826	-70.16
C ENHANCED SERVICE LEVELS								
8	Capital expenditure	£m	3	7.378	7.464	2.899	-4.565	-61.16
9	Additional operating expenditure - customer service	£m	3	0.520	0.608	0.239	-0.369	-60.74
D MAINTAINING SUPPLY/DEMAND BALANCE								
10	Capital expenditure supply/demand balance	£m	3	16.653	16.847	18.318	1.471	8.73
11	Total enhancement capital contributions	£m	3	1.259	1.273	2.354	1.081	84.86
12	Capex net of enhancement capital contributions	£m	3	15.394	15.574	15.964	0.390	2.51
13	Additional operating expenditure supply/demand balance	£m	3	0.191	0.224	0.411	0.187	83.43
E EXPENDITURE TOTALS								
14	Total gross capex - gross of grants (ire net) and excluding new outputs	£m	3	105.186	106.414	92.709	-13.705	-12.88
15	Total opex (excluding new outputs)	£m	3	67.841	79.352	72.113	-7.239	-9.12
16	Total gross capex - gross of grants (ire net) and including new outputs	£m	3	105.186	106.414	92.709	-13.705	-12.88
17	Total opex including new outputs	£m	3	67.841	79.352	72.113	-7.239	-9.12

Table 36a – Water Service – Expenditure comparisons by purpose

The PC10 Final Determination documentation provided to NI Water on February 10 did not provide the full transparency for the company to populate the Final Determination baseline on the Capital Investment Monitoring template or AIR Table 35a or 36a. The Utility regulator has provided additional information on 24/05/11 to populate the Capital lines of this table. These are fully reconciled to the Final Determination numbers for the Capex lines.

There are some considerable variations in the CIDA allocations in 2010/11 compared to the PC10 Final Determination which is explained in detail below. This change follows reporter recommendations from 2009/10 and was highlighted to the Utility Regulator in a letter dated 19/05/11. For detailed variations at project level these are best examined on the CIM (table 40). The following commentary will give an explanation of some of the main variances.

New external constraints

It should be noted that the company is under additional external constraints since the Final Determination was published. These cannot be ignored from any comparative work and main factors are as follows:

- **Annual Funding** – NI Water's funding whilst presented in the Final Determination is now overwritten by the Public Expenditure funding which is allocated on an annual basis. This has affected NIW with initial budgets showing £20m greater than PC10 spend in 2011/12 of £205m (this has since been reduced to PC10 levels), and a reduction of £36m in 2012/13 against the PC10 budget. This revised PE budget has created a sawtooth investment profile and is presenting NI Water difficulty in managing the Capital Works Programme for 2012/13 in particular as a significant portion of the spend in this year will be a result of projects started in 2011/12. This creates an inefficient approach for delivery of the programme as the company no longer has full control of the PC10 package.
- **Monitoring rounds** – In addition to the removal of any annual flexibility there is the additional complexity that the annual budgets will be subject to the in-year monitoring rounds which may reduce or increase funding. This approach to capital funding provides little opportunity to plan investment to follow the full Regulatory framework. This has been a particular issue in 2012/13 which is outlined within the general in year explanation below.
- **Governance Changes** - NIW has seen substantial and continuous changes in capital spend governance during the PC10 period. NI Water is required to comply with the guidance provided by CPD and the requirement of DRD re consultancy. The full impact of these changes is to extend the usual delivery time for a project over £2m by 6-12 weeks in reaching A3 stage. Smaller projects have proportionally smaller delays.

During the year 2010/11 NIW was issued with a range of governance circulars which have impacted on delivery. In the autumn restrictions were placed on the use of frameworks – which caused around 6-8 weeks delay in the water mains programme and other framework contracts until the guidance could be amended. In March guidance was issued on the use of external consultancy, requiring ministerial approval for all consultancy. Some ambiguity remains around spend on feasibility studies which drive the construction of a physical asset. NIW are seeking clarity on this issue as this could potentially require all feasibility work prior to construction would require ministerial approval.

- **Delays in acceptance of the PC10 Final Determination** – The issues surrounding an NDPB negotiating a regulatory settlement with a regulator were exceptionally complex. Eventually a process and direction was agreed, which resulted in the Memorandum of Understanding between the NIAUR and DRD, setting out some of the key principles. This allowed the overall PC10 settlement to be agreed by the NI Water board on the 13th December 2010 – 9 months after the start of the control period.

General in year explanation of variation

- **PE change** - During 2012/13 the budget was revised with a transfer of £12m PE funding from the PC13 period into PC10 in September 2012. A further £5m was accepted in capital funding for 2012/13 after the submission of the revised PC13 submission Table 3.3. This was offset by £4m from the Belfast Tunnel adjudication being returned to Treasury when received on the 1st March 2013.

The total increase in PE funding for the Capital Programme in the 2012/13 year was £13m. The timing of the additional investment in the second half the financial year posed a significant challenge for NI Water in the delivery of the Capital Programme.

- **Lands issues** - Complex lands procurement issues has been a particular issue for the WwTW programme – NIW cannot pay more than the commercial value of the land as determined by the Valuation and Lands Agency. Given the significant drop in land valuations around towns and villages across NI the current valuations represent a diminution in value which results in a reluctance to sell. This is causing complex negotiations on valuations or slow compulsory purchase proceedings involving DRD.

The PC10 programme was assessed on the immediate priority of each project, however the three year period did not allow sufficient time to address complex lands issues and still deliver all the relevant nominated output projects. An example is Ballycastle WwTW where lands have not been acquired during the period.

Comparison issues

General Matters

The COPI factor of 1.012 has been derived from the information provided in the UR Chapter guidance. This figure is less than 1 due to deflation in the COPI index in the period 2009/10 – 2010/11 before returning to a positive index in 2011/12 and 2012/13.

It should be noted that provisional COPI figures for 2012/13 have since been released and the amended COPI factor is 1.018. This change would increase the total PC10 FD allowance in Column to by £0.66m. For this reason care should be taken when using this data.

Given that COPI is a combined set of indices from a number of industries, many of which has suffered significant declines due to the recession, NI Water is does not

accept the scale of the decline shown by COPI during 2009/10 and 2010/11, in respect of the Water Sector.

The MoU and CWA makes specific reference to COPI, stating that “The impact of COPI will be noted and monitored but no account taken of it until PC13 unless NI Water bring a bid forward for additional funding.” This element of the agreement is particularly relevant as the uncertainties around the funding available to NI Water and the level of investment that could be committed has meant that it has not been possible for NI Water to move forward with the proposed Alliance for delivering the majority of the CWP.

For the above reason NI Water have applied a conversion factor of 1 from 2007/08 base year for 2011/12 within Table 40 dashboard.

Figures reported in Columns 1 and 2 of this table are post efficiency.

PPP

No PPP is included in this table.

Line commentary

The follow line commentaries explain the variance between the PC10 FD 2007/08 prices converted to 2011/12 prices using actual COPI provided in the guidance against the actual expenditure in the year. Most of the analysis for this commentary has taken place in Table 40 and given that this table does not reconcile to the AIR table due to the approach adopted for reporting CIDA on the CIM (see Table 40 commentary for variances) the figures shown are an indicator of the magnitude of the variance.

Line 1-Base operating expenditure

The figure for column 1 is populated using the NI Water PC10 Business plan split from Table B3.40 and Table B3.41. This gives a Sewerage split of 50% for 2012/13.

This line is showing a reduced OPEX expenditure in 2012/13 and relates to the company becoming more efficient in respect of OPEX.

Line 2 – Infrastructure Renewals Expenditure (net)

This line is showing a reduced expenditure in 2012/13 compared to PC10 FD projected expenditure in 2012/13 prices using UR projected COPI. This is due to programme delays in the sewer maintenance, flooding and DG5 sub programmes.

In addition to the under spend there is also a change in CIDA allocation following the ‘Reporter recommendations in AIR10’ which present an additional IRE requirement based on the PC10 Final Determination.

The Reporter recommended that when an asset is being replaced, Base Maintenance is included in the CIDA allocation of the replacement asset. This is documented in the reporters report for AIR10 Table 32 with the following points being made:

- a) *‘there is a general under allocation to Base Maintenance (B), as demonstrated in the Reporter’s QBEG for schemes reviewed’*
- b) *JG036 – a recommended increase in B allocation from 2% to 31% for the project.*

However the QBEG recommended by the reporter does not discuss the infrastructure / non infrastructure implications of the change. In the case of project JG036 (Castor Bay to Dungannon), CIDA now reflects a Base allocation of 31% which is split 4% non-infrastructure (associated with the Water Pumping station) and 27% infrastructure (associated with the new Trunk Main). The 27% infrastructure base allocation has a direct impact on IRE despite the fact that no maintenance took place on the infrastructure asset. The increase in maintenance spend did not maintain the network; rather it extended the network and should therefore be allocated to Enhancement categories only.

The principle outlined above has also been applied to WwTW pump away solutions. In the case of KV045 (Mullaghbane WwTW), Mullaghbane WwTW will be replaced with a Terminal Sewerage Pumping Station (SPS) and a Sewerage pumping main to Forkhill WwTW where treatment for the two sites will take place. In this project, the Base allocation of 39% is split 23% non infrastructure (associated with the terminal SPS) and 16% infrastructure (associated with the new pumping main).

This had the effect of increasing the Sewerage Infrastructure base allocation for PC10 period and means that the PC10 IRE allocation cannot be directly compared with the current allocations. It also means that the PC10 IRE funding will not cover these changes.

Line 3 – MNI (Gross of grants and contributions)

In 2010/11 we reported a significantly reduced spend on this line compared to the PC10 allocation. The Base Maintenance –Sewerage non-infra programme has successfully delivered in 2011/12 and 2012/13, showing an £16m and £7.9m overspend in the years respectively compared to an under spend of £8.5m in 2010/11.

The following is a summary of the main WwTW base maintenance projects in 2012/13:

- i. Ballymena WwTW (KB460)
- ii. North Coast WwTW (KC446)
- iii. Belfast WwTW. (KR485,KR530)
- iv. Strabane WwTW (KN631)
- v. Rasharkin WwTW (KC429)
- vi. Dunloy WwTW (KC430)
- vii. Ballyclare WwTW (KA242)
- viii. Moy WwTW (KF370)
- ix. Redford WwTW (KF368)
- x. Culmore WwTW (KL508)
- xi. Lisnaskea WwTW (KP679)
- xii. Feeny WwTW (KL496)
- xiii. Tobermore WwTW (KL485)
- xiv. Whitehouse WwTW (KR486)

In addition it is noted that £1.4m of this line is spend on sub programme 12 (sewerage) on non-infra items which includes Sewerage pumping stations. These non-infra items were not included in the PC10 final determination within this sub-programme.

Lines 7, 9 & 13– OPEX from Capex

These lines are all showing reduced spend in 2012/13 compared to the Final Determination. This is the case for a number of reasons including:

- a) The process used to extract the actual costs from the General Ledger (GL). Given that all sites are not available in detail on the GL all Opex from Capex is also not available. The numbers presented are primarily based on power requirements. Given that NIW obtained more competitive power tender rates in 2010/11 and 2011/12 the Opex from Capex is showing small actual outturns compared to the PC10 projections.
- b) The OPEX from CAPEX shown within 2011/12 relates to only the Capital Works Programme. No M & G Opex from Capex is included in the 2011/12 actual figures.
- c) Six WwTW's that were included with the PC10 Business Plan have achieved beneficial use prior to PC10 commencement. The OPEX from Capex for these sites has not been claimed in PC10 and as a result there is a -ve difference from the Final Determination.

It should be noted that the process of capturing Opex data has improved with the introduction of the 'Cost to Serve' project. Power data is now available by site linked to CAR ID and work is ongoing to map further direct costs.

Line 6 - Capex - Total Quality Enhancement Programme

The quality enhancement (Q) programme has spent less than the PC10 projection for 2012/13. This is due to a slower start on the Waste Water Treatment new starts in 2010/11 and also due a change in the actual CIDA allocations on both the Waste Water Treatment new starts and Waste Water Treatment carry over projects with less spend in Quality Enhancement and more spend in Supply Demand Balance than was projected. The main variances are described as follows:

- The main sewerage programme has suffered delays and is showing a variance of c-£7.1m (T40 analysis). This is a knock on effect from the earlier years from delayed projects and the sub-programme was unable to recover pace in 2012/13 as predicted in AIR 12.
- A variance of c£2.3m (T40 analysis) on Wastewater Carryover projects is primarily due to carryover projects being delayed and interim solution projects being extended to provide permanent solutions.
- A variance of c-£12.1m (T40 analysis) on Waterwater Treatment new starts relates to a delayed starts to this PC10 sub programme and a shift in CIDA allocation to additional Base Maintenance than was provided for in the NI Water T40 Baseline. Three projects within this sub programme, Gulladuff, Maghera and Ballintoy will not be delivered in PC10. A large portion of this funding was for additional outputs but when PE funding was reduced this area was the first to be sacrificed with the projects being delayed into PC15.
- A variance of c-£3.4m (T40 analysis) on the Small Wastewater Treatment sub programme is due to a shift in CIDA allocation from Q to both Base Maintenance and Supply Demand Balance.
- Most of the remaining variance is explained in the PC10 final determination interpretation. T40 provides the NIW view whereas the UR detail is shown on T36a.

Line 8 – Capital expenditure-customer service

Variance on this line is explained by 2 main variances as follows:

- In 2012/13 there has been c-£1.0m (T40 analysis) reduced expenditure on Sewerage Maintenance, Flooding and DG5 relating to expenditure on DG5 properties.
- The M & G Enhancement projects have suffered delays in PC10 with reduced spend from the FD in 2012/13.

Line 10– Supply/ Demand Balance

The main variances on this line are explained as follows:

- c-£4.1m (T40 analysis) of reduced spend on the Sewerage Maintenance, Flooding and DG5 due to delays in this sub-programme.
- c-£2.4m (T40 analysis) of additional spend on Wastewater Treatment Carryover projects. This is due to CIDA allocation change from the PC10 Final Determination and interim solution projects being extended to permanent solutions.
- c-£1.3m (T40 analysis) of additional spend on Small Wastewater Treatment projects. This is due to CIDA allocation change from the PC10 Final Determination.
- c-£3.8m (T40 analysis) of additional spend on new Development sewer extensions.
- Most of the remaining variance is explained in the PC10 final determination interpretation. T40 provides the NIW view whereas the UR detail is shown on T36a.

Line 16 - Total Gross Capex - Gross of Grants (IRE Net) and Excluding New Outputs

The total PC10 Water predicted expenditure as per the table is £106.4m in 12/13 prices. The actual expenditure was £92.7m.

Table 40 – Capital Investment Monitoring (CIM)

1.0 Executive Summary

During the PC10 period NI Water has successfully invested over £517m of Capital expenditure, delivering benefits across Northern Ireland.

- £26m invested in improvements to services to customers
- £112m invested in environmental improvements through upgrades to sewers and wastewater treatment works and improvements in drinking water quality.
- £124m invested in capacity to support growth, security of supply and new development across Northern Ireland.
- £255m invested in maintaining NI Water's assets in all areas to maintain services to customers.

In the AIR13 outputs reporting process NI Water will be providing a detailed breakdown of the outputs delivered in PC10. However NI Water is pleased to report that it has succeeded in delivering the vast majority of PE10 outputs and delivering a number of additional outputs beyond the PE10 monitoring plan requirements. Whilst overall funding available during PC10 was reduced NI Water has successfully invested its full Base Maintenance allocation as illustrated in Figure 1. Investment in Enhancement areas of 'Q' and 'E' have been reduced in alignment with revised PE10 agreed target outputs.

Figure 1 – CIDA split for PE10



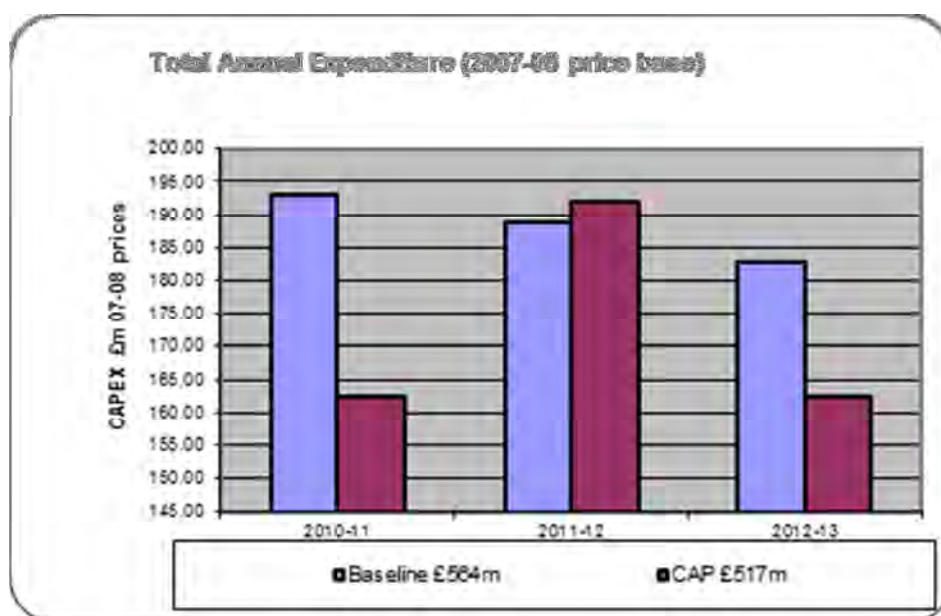
The delivery of the NI Water PC10 capital programme has successfully surmounted significant challenges over the 3 years.

- Extreme winter weather in all 3 winter periods in PC10 which impacted construction of capital assets.
- Extreme summer (wet) weather in 2 of the summers, particularly in 2012/13 again impacting construction.
- Changes in Public Expenditure budget allocation, both between years and within years.
- Change of NI Water's status to non-departmental public body with the loss of year end flexibility and other commercial freedoms.

The change in budget can clearly be seen in Figure 2, comparing the PC10 Final Determination with the PE budget. This explained each year as follows:

- 2010-11: NI Water did not achieve the full expenditure in the year and the remaining investment was not available for carry forward to years 2 and 3 with the loss of year end flexibility.
- 2011-12: A small increase in funding was made available which was invested successfully.
- 2012-13: PE funding was reduced significantly and some of this was reinstated during the financial year. The majority of this reinstated funding was drawn forward from PC13.

Figure 2 – PC10 PE10 budget comparison



1.1 Company Commentary

Table 40 includes a representation of the Capital Works Programme for PC13, based on the Capital Works Programme, (CWP), profiles and projections from the 13/14 approved capital budget and PC13 Baseline information based on the PC13 Final Determination. This CIM includes Current Actual Projections (CAP) for the period 1st April 2010 – 31st March 2013 which now represents the Actual PC10 period expenditure. A summary is provided in Annex A.

1.2 Operating Background

Following the signing of the Memorandum of Understanding between the DRD and the UR on 22nd November 2010 the NI Water Board accepted the amended PC10 Final Determination (FD) on 13th December 2010.

NIW is now part of the Public Expenditure (PE) process within the Northern Ireland Assembly budget process. NIW received their indicative budgets for 11/12, 12/13, 13/14 and 14/15 on the 11th March 2011 (subject to the monitoring round and annual expenditure pressures within each year). This process resulted in reduced funding for the PC10 period compared to the original PC10 Final Determination.

NI Water and the UR undertook the PE10 change process for the capital works programme between July and October 2011, resulting in a revised agreed monitoring plan. This formed the basis for the programme for the remainder of the PC10 period. The 2012/13 budget was revised with a transfer of £12m PE funding from the PC13 period into PC10 in September 2012.

A further £5m was accepted in capital funding for 2012/13 after the submission of the revised PC13 submission Table 3.3. This was offset by £4m from the Belfast Tunnel adjudication being returned to the Treasury when received on the 1st March 2013.

The total increase in PE funding for the Capital Programme in the 2012/13 year was £13m, and with this additional investment received late in the financial year this posed a significant challenge for NI Water in delivery of the Capital programme. It is estimated that the £13m additional spend increased the carryover significantly, with carryover between 2012/13 and 2013/14 being approximately £74m, or 63% of the 2013/14 capital budget, a substantial increase from the carryover expected before the additional funding was received. The impact of this in PC13 is explained in the programme commentary.

Issues within other major capital schemes in the Northern Ireland Public sector indicate that NI Water may be subject to significant and unpredictable in-year and inter-year budget pressures in 13/14 and 14/15.

1.3 Company Baseline

NI Water has inserted a PC13 Baseline in this CIM submission as per the UR request. This aligns with the PC13 Final Determination prior to the application of COPI adjustment to the 10/11 price base as requested and replaces the PC10 Baseline.

1.4 Capital Expenditure Commentary

This submission is completed using the same approach as that submitted previously with non- Capital Works Programme (non-EP) lines being analysed manually from Oracle.

The following is a summary of CAPEX expenditure in 2012/13 (excluding contributions) at the end of Q4 as per ORACLE and reconciled to the CIM submission shown in money of the day.

	£m
Total capital expenditure as per ORACLE	162,257
EP capital from CAPTRAX reported to CIM	116,159
Non EP capital from ORACLE	35,019
Capitalised Salaries and overheads	11,091
Rounding from ORACLE to CAPTRAX/CPMR	-0.012
Reconciled Total	162,257

During the period (April 2012- March 2013) there has been capital income in the form of Grants and Contributions totalling to £4.854m. This figure is not included on the CIM submission as per the UR guidance. In addition £0.490m in respect of PPP Capital Maintenance is not included within the above detail.

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. Further improvement of the date information within the CIM will be carried out over the PC13 period.

1.5 Inflation Assumptions

The project costs reported in the 'current actual or projected' portion of the CIM are in current prices. All project costs are captured in nominal prices and no inflation assumptions are applied within CPMR.

1.6 16 Box models

2012/13 Current actual 16 box model showing expenditure £m

	Water Infrastructure	Water Non-infrastructure	Sewerage Infrastructure	Sewerage Non-infrastructure	Totals
Quality Enhancement	7.88	2.33	5.87	15.37	31.45
Base service provision	22.59	16.26	9.34	41.12	89.31
Enhanced service levels	2.15	0.72	1.24	1.29	5.40
Supply Demand Balance	13.10	4.59	7.40	11.02	36.11
Totals	45.72	23.90	23.85	68.80	162.27

2012/13 Current actual 16 box model in %

	Water Infrastructure	Water Non-infrastructure	Sewerage Infrastructure	Sewerage Non-infrastructure	Totals
Quality Enhancement	4.85%	1.44%	3.62%	9.47%	19.38%
Base service provision	13.92%	10.02%	5.76%	25.34%	55.04%
Enhanced service levels	1.32%	0.44%	0.76%	0.80%	3.33%
Supply Demand Balance	8.08%	2.83%	4.56%	6.79%	22.25%
Totals	28.18%	14.73%	14.70%	42.40%	100.00%

PC10 16 box showing expenditure across the 3 years of the programme

	Water Infrastructure	Water Non-infrastructure	Sewerage Infrastructure	Sewerage Non-infrastructure	Totals
Quality Enhancement	27.05	5.92	27.75	48.99	109.71
Base service provision	66.97	52.88	24.73	116.53	261.11
Enhanced service levels	9.53	2.43	8.91	3.68	24.57
Supply Demand Balance	46.34	16.01	20.10	38.71	121.16
Totals	149.89	77.24	81.49	207.92	516.54

PC10 16 box FD baseline (07/08 prices) showing expenditure across the 3 years of the programme

	Water Infrastructure	Water Non-infrastructure	Sewerage Infrastructure	Sewerage Non-infrastructure	Totals
Quality Enhancement	25.97	10.49	42.10	93.95	172.50
Base service provision	61.51	49.39	40.10	100.15	251.14
Enhanced service levels	3.74	13.40	8.10	15.07	40.31
Supply Demand Balance	44.96	16.88	17.64	20.84	100.31
Totals	136.17	90.15	107.94	230.00	564.25

The analysis of the PC10 programme indicates that the base maintenance programme has been sustained and in 2012/13 was further increased substantially to utilise the additional investment in delivery of Base Maintenance projects. This has resulted in a slight overspend of £10m or around 4% on base maintenance in PC10 – based on the baseline excluding COPI.

The impact of additional water mains and trunk mains schemes can clearly be seen on the increase in the water infrastructure line, which has significantly increased even with the pressure on enhancement investment. This has been offset within the water non-infrastructure and sewerage infrastructure areas. The water non-infrastructure investment was heavily affected by the reduction in M&G, which in PC10 was originally coded 50% to water non-infrastructure.

1.7 CIM Summary Table

Prog Code	Title	Current Actual 12/13 – nominal prices	Current actual and Projected – nominal prices PC10	Baseline expenditure PC10 - 07/08 prices
0	Staff salaries and on-costs	11.091	29.59	28.35
1	Base maintenance (Water)	3.416	7.60	19.16
2	Base maintenance (Sewerage)	20.816	49.22	65.91
3	Water resources	3.738	7.57	5.02
4	Water treatment works	0.179	5.62	4.38
5	Water trunk mains	4.443	28.43	16.22
6	Service reservoirs and clear water tanks	1.163	8.99	13.48
7	Service reservoir rehab	0.280	2.61	9.72
8	Water mains rehabilitation	29.401	91.09	90.15
23	Water Mains new and replacement	1.128	0.99	
9	Leakage	3.186	9.76	9.69
10	Ops capital Water (Base)	7.948	24.63	9.74
11	Named sewerage projects	0.114	9.40	5.03
12	Sewerage Maintenance, Flooding and DG5	13.027	45.71	83.39
24	Sewerage - Development and ad-hoc repairs	4.281	10.19	
15	Wastewater treatment (carry over projects)	4.898	53.02	44.25

16	Wastewater treatment (new starts)	24.136	44.76	36.46
17	Small wastewater treatment works	3.434	20.31	12.43
18	Ops Capital Sewerage (base)	8.732	24.10	15.40
19	Metering	1.775	6.18	3.38
20	M&G	15.083	36.76	53.22
	Totals	162.269	516.23	564.25

Within Table 1.7 the baseline figures are in 07/08 prices and current actual and projected figures are in nominal figures.

1.7.1 Reconciliation with Tables 35 and 36

Table 35 - Water service nominal expenditure

Table 35 line description		T35 £m	CIM £m	variance £m	Variance %
3	MNI (gross of grants and contributions)	15.909	16.259	0.350	2.15
6	Infrastructure renewals expenditure (gross)	22.593	22.593	0.000	0.00
7	Capex: Total quality enhancement programme	9.972	10.207	0.235	2.30
9	Capital expenditure: customer service	3.126	2.868	-0.258	-8.99
11	Capital expenditure supply demand balance	8.568			
16	Capital expenditure - security of supply	9.214	17.691	0.091	0.51
	Totals	69.382	69.618	0.236	0.34

Table 36 - Sewerage service nominal expenditure

Table 36 line description		T36 £m	CIM £m	variance £m	Variance %
3	MNI (gross of grants and contributions)	41.258	41.119	-0.139	-0.34
6	Infrastructure renewals expenditure (gross)	8.775	9.340	0.566	6.06
7	Capex: Total quality enhancement programme	21.626	21.242	-0.384	-1.81
9	Capital expenditure: customer service	2.899	2.533	-0.366	-14.43
1					
1	Capital expenditure: supply demand balance	18.318	18.418	0.100	0.54
	Totals	92.875	92.652	-0.224	-0.24

The above table shows the comparison between the CIM and Table 35 and 36 from AIR. The treatment of grants and contributions is consistent in both table forms. Line 16 has been added to Table 35 to facilitate direct comparison on a like for like basis. 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. Within AIR the Capitalised Salaries and overhead information is included within individual project costs.

1.7.2 Changes on the CIM since draft submission

The following changes have been made post Q4 submission:

1. Service Allocations and Purpose allocations for the summary lines reflecting operational capital and M & G spend have been revised to reflect the 2012/13 and not the full PC10 period as was the case in the draft submission.
2. The Service allocation and the purpose allocation for Capitalised Salaries and overheads have been updated to reflect the 2012/13 year.
3. Service allocation on KS812 has been updated to be consistent with the data reported in AIR13 Capital tables
4. Purpose allocation on JP669, JR463, KS812 and KP369 have been updated to be consistent with the data reported in AIR Capital Tables.

1.8 Operations Capital and Management & General (M &G) commentary

The following assumptions have been applied within the Operations Capital and Management & General (M & G) lines which relate to PC10 sub programmes, 09, 10, 18, 19 and 20 as follows:

- a) Most of the Operations Capital programme is reactive.
- b) The M & G programme has been subject to revisions of business need.
- c) Service allocation and purpose allocation (QBEG) for these sub programmes has been revised for this submission so that they reflect the expenditure in 2012/13 year.

The projections of Capitalised Salaries and On-costs for PC13 follow the amended application of the capitalisation policy.

1.9 PC10 CAPEX Commentary

NI Water retains the complex governance and reporting arrangements associated with being both a regulated GoCo and an NDPB as introduced in 2010/11. NI Water remains integrated in the public expenditure process, subject to fluctuations in the budget and delivery delays across the public sector.

NI Water also retains all the public sector governance, including external referrals for major projects and regular governance changes required by the public sector, the most recent being changes to corporate approvals processes required by DAO 06/12 and recent guidance on professional services expenditure.

NI Water does not have the commercial freedoms to negotiate lands purchases outside government guidelines. This has held back a number of projects where variance between the lands valuation and the owner's expectation has resulted in protracted lands acquisition and planning processes.

The integration with the public expenditure process has been demonstrated in the transfer of funding between price control periods and the provision of additional short notice funding within years.

This has had a significant impact in both 11/12 and 12/13. The £183m CAPEX budget was in excess of the PC10 budget for the 2011/12 year within the final determination. NI Water was able to invest this funding, but this had impacts on delivery profile in 2012/13. In 2012/13 a transfer of £12m from PC13 to PC10 was made with 6 months to invest the funding. A further transfer was made later in the year with 5 months to spend the funding.

The sawtooth nature of the funding makes the CAPEX programme challenging to manage. Following the successful delivery of £182m invested in 2011/12 much of the enhancement spend planned in 2012/13 was on already committed schemes,

and a limited number of early PC13 schemes advancing to start early in 13/14. The remaining investment was focused on base maintenance to sustain the company. When additional short notice funding became available both Enhancement and Base Maintenance programmes were accelerated.

The impact of these additional funding streams is amplified by the lack of year end flexibility, shown by the £30m funding return in 2010/11 due to a range of issues, but particularly the extreme weather in December 2010 and January 2011 which impacted construction and the £4m return in 12/13, which could not be invested in the year the funding was available.

1.10 Programme Level Commentary

Timing of funding change

The budget allocation moves money across price control periods and in order to invest the funding delivered the project mix in delivery for the £13M will, despite NIW's best efforts, not match the delivery programme set out in the PC13 submission.

The impact on the capital works programme of the additional funding was significant as due to the time constraints only those projects ready to progress to A3 could be brought forward to spend in 2012/13. To invest the £17m in the time period approximately £50m of schemes had to be started, with an estimated £40m carryover into 13/14.

The immediate response of additional funding in 2012/13 was the acceleration of carryover nominated outputs, including KV145 Mullaghbane WwTW and KV045 Forkhill WwTW. Additional projects were initially drawn from PC13 nominated outputs, where the projects had advanced sufficiently to be brought forward, projects including KS225 Ardglass WwTW, KB314 Gulladuff WwTW, KL386 Gortnahey WwTW and KB459 Maghera WwTW Phase 2. Other potential outputs were also considered including KS374 Hunters Mill, KS389 Ballymartin and Blackrock. The PC10/PC13 nominated outputs available for immediate delivery did not absorb the additional funding.

The remainder of the additional funding was utilised to commence a number of Base Maintenance projects. Early indications are that the carryover of these projects into PC13 substantially increases the base maintenance in wastewater non-infrastructure in PC13. As a result the CIDA balance of the PC13 capital programme has been affected with a move towards base maintenance. The impact of this can be seen clearly within the CIM financials template.

The expiry of the IWWF framework in November 2012 at the end of its timescale without extension had a significant impact on the CWP. NI Water is considering the mitigating actions needed to minimise the effect on the investment programme of the expiry of the IWWF framework and the challenges to the development of the main CWP delivery framework in IF19. Expectations remain that IF19 will be available in 13/14 to start PC13 delivery but mitigating actions in the event this is not the case are being considered. The initial mitigating actions in developing the base maintenance programme and starting the nominated outputs programme early have amplified the effect of the additional funding issued to NI Water.

The cross price control nature of the investment change

The sharp reduction in programme in 12/13 limited project selection for delivery in 12/13 and these were drawn from the running base maintenance programmes. Early indications are that this will increase the base maintenance planned for PC13, and NI Water will try to minimise the impact on the programme for the delivery of nominated outputs. However with a change of this size a number of nominated outputs delivery cycles will be changed and outputs may be postponed to PC15. NI Water is reviewing the impact of these changes which will be discussed with stakeholders through the change process.

The 2012/13 CIM contains the live programme for PC13, including an over-profile of £30m over the period, £10m in 13/14 and £20m in 14/15. This will be resolved over the first period of 2013/14.

The programme contains a number of expected changes, which will need to pass through the regulatory change protocol prior to agreement. Examples of the expected changes would be the inclusion of Dorisland WTW GAC filters at the request of DWI which will require the removal of other projects.

All non-infrastructure carryover projects spending less than £50k in the PC10 period are assigned to the appropriate Base Maintenance programme.

Some projects have been added to the CIM as a result of financial adjustments affecting spend in previous years. These projects have been assigned to the appropriate programme.

0. Staff salaries and overheads

The forward projection for Capsals and On-costs for the PC13 period is based on the 2013/14 revised budget. Staffing costs associated with all CAPEX delivery including M&G have been reviewed and increased from the business plan submission by approximately £400k. During PC10 there has been a significant change in the allocation of staff salaries and overheads. In the PC10 business plan capitalised salaries were primarily considered for the CWP. Now the wider ICT, BI and Operations Capital Programmes all contribute to the capitalised salaries and on costs.

1. Base Maintenance – Water (Non-infrastructure)

The delivery of JI015 enhanced site security programme will become a PC10 carryover project, as the delivery will not be complete by the end of PC10. This delay in delivery transfers £1.5m, mostly enhancement spend to 2013/14 due to difficulties in delivery.

JF581 Clay Lake remedial works – this project will complete in early PC13.

The investment in this area was very comparable with the initial Planning investment over the PC10 period

The feasibility elements of the water non-infrastructure programme are under development, but have yet to be fully profiled. This will occur over the next 6 months as the feasibility studies are completed to support the PC15 programme.

2. Base Maintenance – Sewerage (Non-infrastructure)

Approximately £10m additional has been spent in this area over PC10 to maintain WwTW's and WwPSs to ensure quality discharge standards.

This programme has been significantly accelerated in order to meet investment targets and mitigate against the consequences of the commercial challenges to IF19 in a public expenditure environment. The projects approved towards the end of the final quarter in 2012/13 are now fully profiled and being delivered.

a. Major WwTW short-life equipment replacement

Due to the procurement and investment constraints it was necessary to accelerate the PC13 WwTW base maintenance programme.

These included PC13 nominated base maintenance outputs. KR530 Belfast WwTW base maintenance Phase 2 has been reduced in scope to a total value of £2m; however ongoing base maintenance at the site will see a series of projects being raised to maintain NI Water's largest WwTW. A number of other smaller projects invested in 2012/13, including work at KP679 Lisnaskea WwTW, KR502 Greenisland WwTW and KT406 Drumbeg WwTW.

This represents the start of the prioritised programmes of base maintenance to ensure that NI Water assets serviceability is maintained – focussing on the larger sites. This will see a series of base maintenance projects developed for the larger sites as assets reach the end of their useful lives.

b. Targeted replacement programmes

Whilst this work was reduced in early 2012/13 to accommodate the reduction in CAPEX budgets the additional funding has allowed some aspects around PLC modernisation to occur.

c. Base Maintenance arising from the wider CWP

The acceleration of elements of the enhancement programme has drawn down the allocation of base maintenance within the programme. This acceleration has increased the overall base maintenance requirement within the programme.

d. Base Maintenance at SPS

This programme has been significantly accelerated, with 4 major programmes of work addressing a prioritised WwPS list identified by NI Water. The 4 major projects accelerated are KS900, KI501, KI502 and KI503, which have invested significant base maintenance funding in 2012/13. An extension of KI488 to replace life expired equipment with pumping systems more appropriate for the duty is likely to be extended into the PC13 period.

The CIDA for these projects will be reviewed to ensure that the requirements of NIEA are met at upgraded sites and to determine the appropriateness of the current base maintenance allocation. Individual WwPS upgrades will be discussed with NIEA through the usual pre-application process.

e. Feasibility requirements for PC15

The feasibility requirements for the development of the PC15 programme for WwNI projects has been significant in the last 6 months of PC10 and the first 6 months of PC13. This has occurred earlier than anticipated within the PC13 submission, due to the additional funding. The estimated total expenditure on feasibility on WwPS and

WwTW projects based on the current profiles in this area in the PC10 period is currently profiled as £2.2m with a further £700-900k required to complete the feasibility studies within PC13. Further feasibility work will be required to support the development of programme 12 for PC15.

3. Water Resources

The profile for this programme has not changed significantly since the previous submission. JN226 Strule intake for Derg WTW has a revised completion date in May 2013.

The tendering process for the remaining Panel Engineers work is under way, to allow for completion in PC13.

4. Water Treatment Works

The identification of the needs for the water treatment works in the PC15 period has identified a number of potential quality issues. This has been developed into feasibility work for both Killyhelvin and Dorisland GAC plants.

5. Water Trunk Mains

The trunk mains programme is progressing as expected, with JR342 Castor Bay to Belfast TM progressing reasonably well. Given the risks and issues remaining for the project it is likely that the project beneficial use may fall into PC15. NI Water will monitor this risk.

There has been some minor scope change in JR460 Gravity 2 McVeighs Well to Oldpark, where some of the modifications to pipework at McVeighs Well was carried out in advance of the main project

6. Service Reservoirs and Clear Water tanks

The PC10 programme for this service area is complete – this programme is now preparing for the delivery of Crieve SR within PC13 and the development of the PC15 programme. A single SR, KC335 Monaclough SR, remains in the additional outputs list and may be brought into PC13 if selected as an additional output.

7. Service Reservoir Rehabilitation

This programme retains the SR security project and the wider SR rehab programme. During PC10 the SR rehab programme has suffered significant delays as a result of procurement issues.

These have been resolved for PC13 and the programme will be taken forward in PC13. A number of larger SRs require Rehab and these will be individually identified in the programme.

8. Water Mains Rehabilitation

The water mains programme has remained stable with some slight variation as the delivery programme for the MIMP projects has been developed. Programme 08 and Programme 23 have between them invested £92.08m in PC10. The project management expenditure for the programme has been reported in K1522 within the M&G programme, with a total cost of £700k for the 2012/13 year, bringing the total watermains spend to £92.9m in PC10.

NI Water has reduced the rate of water mains delivery in 2012/13 to avoid overspending in this area, whilst starting the MIMP projects as requested by DRD on

receipt of additional funding. NI Water has not commissioned significant watermains expenditure to absorb additional funding in 2012/13.

The watermains framework contract was subject to an inflationary increase based on COPI within the framework contract. An additional claim was submitted for the additional cost of PE pipe, which has increased significantly in price.

9. Leakage

The leakage programme continues to invest at the levels expected and has a representation of the programme into PC13 based on the 2013/14 budget.

10. Operational Capital Water

The operational capital maintenance programme is continuing to invest as planned across the Water infrastructure and Water Non-infrastructure assets.

The CIDA for the programme in PC13 reflects the PC10 CIDA allocation to ensure that PC10 is correctly reported. The changes within the Operations capital programme are mainly through the addition of further base maintenance allocations and so should not cause material change within the programme.

11. Named Sewerage Projects

This programme has completed with the final projects closing out in the final months of PC10. This programme may remain within the CIM in PC13 to report on any remaining lands payments.

12. Sewer Maintenance, Flooding and DG5

The PE10 UID targets have been exceeded during PC10. The PC10 UID programme has been reviewed and agreed with NIEA and a number of issues and follow on actions have been generated.

This gives a total delivery of UIDs in the PC10 period of 101, 33 more than planned in the PE10 monitoring plan.

KR255 Belfast Sewers Project – This project's main contracts are now complete following adjudication.

In this programme as part of the mitigating actions around the termination of IWWF some significant WwPS quality projects have started in the period, including KF037 Annagher PS and KV154 Newry Road Warrenpoint PS.

A detailed list of all the UIDs delivered in PC10 will be provided in AIR13 Table 16 commentary.

There are a number of UID schemes which could potentially become PC13 nominated outputs as a result of the PC13 FD additional outputs funding. KS374 Hunters Mill – Downpatrick is an example. This project has received Internal approval to deliver the required investment spend as a potential PC13 output.

In order to facilitate completion of KR439 Millisle Drainage Area Plan a Phase 2 project KS930 has been added to the Capital Programme.

Significant feasibility work has been carried out to understand and address the overall flooding issues in Sicily Park, Belfast with an initial estimate of £12m, with the

NI Water share of upgrades costing £6.5m. The remainder of the costs relates to Roads and Rivers Agency Infrastructure. There is significant political pressure to develop and deliver this scheme, however this cannot be taken forward in isolation and the increased storm discharges to the local watercourses will require significant investment from NI Water in future.

There has been significant development work carried out on the Project/s planned within the sewer network and pumping stations in the Glenmachan, Falls and Boucher Road areas. This has been accelerated due to the impact of the flooding in the area and is estimated to cost approximately £800k.

15. Waste water Treatment (Carryover Projects)

KS225 Ardglass WwTW

The lands issue for this project has been resolved and the project is now progressing to delivery in PC13. This project has been accelerated to absorb additional funding, with a further £400k spent in 2012/13.

KR389 Ballyhalbert WwTW – final solution

This project has encountered significant construction difficulties over the period, with the Long Sea Outfall suffering further delays and requiring a further £1m to address weather related delays. This brings the total increase in the projects budget in the 2012/13 year as £2m.

The remaining carryover projects will be complete by the end of PC13.

In the review of outputs claimed across the SBP/PC10 boundary a number of WwTW sites have not been claimed in previous AIR returns. A review of completion dates versus AIR claims indicates that 4 carryover schemes KF319 Annaghmore, KG145 Derrytrasna, KL300 Dungiven and KB322 Martinstown, which all had spend in the PC10 period.

16. Waste Water Treatment (New Starts)

The majority of projects in this programme for PC13 have been profiled within CPMR. These projects have purpose allocation codes for the PC10 elements of the project i.e. the feasibility studies are coded as base maintenance non-infrastructure. As a result the PC13 programme has an additional base maintenance allocation of approximately £11M, based on the expected CIDA allocation of approximately 40% base and 60% enhancement. Projects for PC15 are shown with feasibility budgets only. Individual variances are seen in profile and cost as a result of changes in pricing, but the programme remains broadly in balance.

NI Water has mitigated the issues around procurement by the acceleration of a number of nominated outputs, including KB314 Gulladuff WwTW, KB459 Maghera Phase2, KL496 Feeny WwTW, KT403 Dunmurry Sludge facility and KL386 Gortnahey WwTW.

Dundrum WwTW is under review to determine if an immediate short term solution can be provided to address the issues at the works given that the discharge from this plant is to shellfish waters in Dundrum Bay. For procurement reasons this may be delivered as part of KS235 Ballynahinch WwTW.

NI Water will report 11 completions of WwTW in PC10 in 2012/13, which brings NI Water to 44 nominated output WwTW completions during PC10, including those WwTW within the additional carryover in sub-programme 15. In addition there were 5 sites with >250pe delivered by RWIP (sub programme 17) during 2011/12 increasing the total from 44 to 49.

KS389 Ballymartin/Blackrock WwTW – This has paused as lands issues re-surfaced in the period.

KC296 Ballycastle – this project has profiled £2.3m in PC13. As this works is currently failing its discharge consent, NI Water would wish to start the project as soon as the long running lands issue is addressed.

KF346 Robinsonstown WwTW and KL394 Drumsurn WwTW which are PC13 nominated outputs have slipped into PC15 – this is due to procurement delivery delays.

17. Small Wastewater Treatment

Additional works were agreed with NIEA for delivery in 2012/13 and a further £2.4m was assigned to the programme.

The PC13 programme has an initial carryover from the 2012/13 project of £1m, with further spend requiring appropriate procurement. The Small Wastewater Treatment programme PC13 expenditure has been assigned to the baseline project until the delivery project for 2013/14 and 2014/15 is developed.

18. Operations Capital (Sewerage)

The operational capital maintenance programme is continuing to invest as planned across the sewerage infrastructure and sewerage Non-infrastructure assets.

Additional base maintenance funding has been added to the PC13 programme 18. This reflects increases in scope, particularly around the M&E base maintenance.

The CIDA for the programme in PC13 reflects the PC10 CIDA allocation to ensure that PC10 is correctly reported. The changes within the Operations capital programme are mainly through the addition of further base maintenance allocations and so should not cause material change within the programme.

19. Metering

In compliance with the PC13 guidance this programme reports solely the metering programme in this CIM.

20. M&G

The M&G programme in 2012/13 has sustained the investment level in 2011/12, which is still some way below the PC10 expected spend. There are a number of potential reasons for this including the M&G delivery staff being accounted for in CAPSALs.

This programme has delivered significant change in the PC10 period, transforming NI Water's accommodation across NI by reducing the number of rental properties used.

The M&G programme in PC10 has suffered disproportionately as a result of the governance changes, slowing procurement and delivery and Procurement rules have made it significantly harder to pilot small scale innovations, and if successful implement them effectively.

The Zonal studies and DAPs from June 2012 are reported within KI522, with the total value being around £800k.

21. PC10 Additional Outputs Programme –

Not used in this submission – integrated into programme 16.

23. Water – Development and ad-hoc repairs

This programme has been revised and projects assigned to the programme in line with the PC13 definitions.

For the PC13 period a representation of the programme has been added, however this has been reduced by £1m to reflect the cost of the major public realm schemes in Ballynahinch and Lisburn being delivered in programme 24.

24. Sewerage - Development and ad-hoc repairs

This programme has been revised and projects assigned to the programme in line with the PC13 definitions. The consultancy and civil delivery for these sites will be handled differently due to the governance requirements. A single parent project, KI464 has been assigned, which will handle a small number of large consultancy contracts. This process reduces the governance overhead, which can be disproportionate to the cost of smaller projects.

This programme has shown a substantial increase in cost in PC10, with the final year indicating an investment of £4.3m. This profile extends into PC13, and some large development projects and public realm schemes will put further pressure on this budget in PC13. This exceeds the PC13 submission which may have underestimated the requirements for this programme.

Ballynahinch and Lisburn have started large public realm scheme, which between them will require approximately £1m of base maintenance expenditure. A public realm policy is in development by NI Water to determine the criteria for replacement of assets within public realm schemes. The proliferation of public realm schemes in Northern Ireland and the quality and specialised nature of the surface finishes make repairs post construction extremely difficult. The start of major road schemes, particularly the A2 in Greenisland will generate further expenditure.

Additional Outputs Programme

There are a number of potential additional outputs projects currently within the programme. Key projects are listed below.

Project Code	Project Name	Investment PC13 (M)
JR463	Dorisland GAC	£4.512
KS374	Hunters Mill	£1.307
KC415	Ballysally CSO package	£2.246
KC302	Ballintoy WwTW	£1.182

There are a small number of other projects which have profiles in PC13 which are not PC13 outputs and these will be cleansed or appropriate delivery profiles agreed as part of the change process.

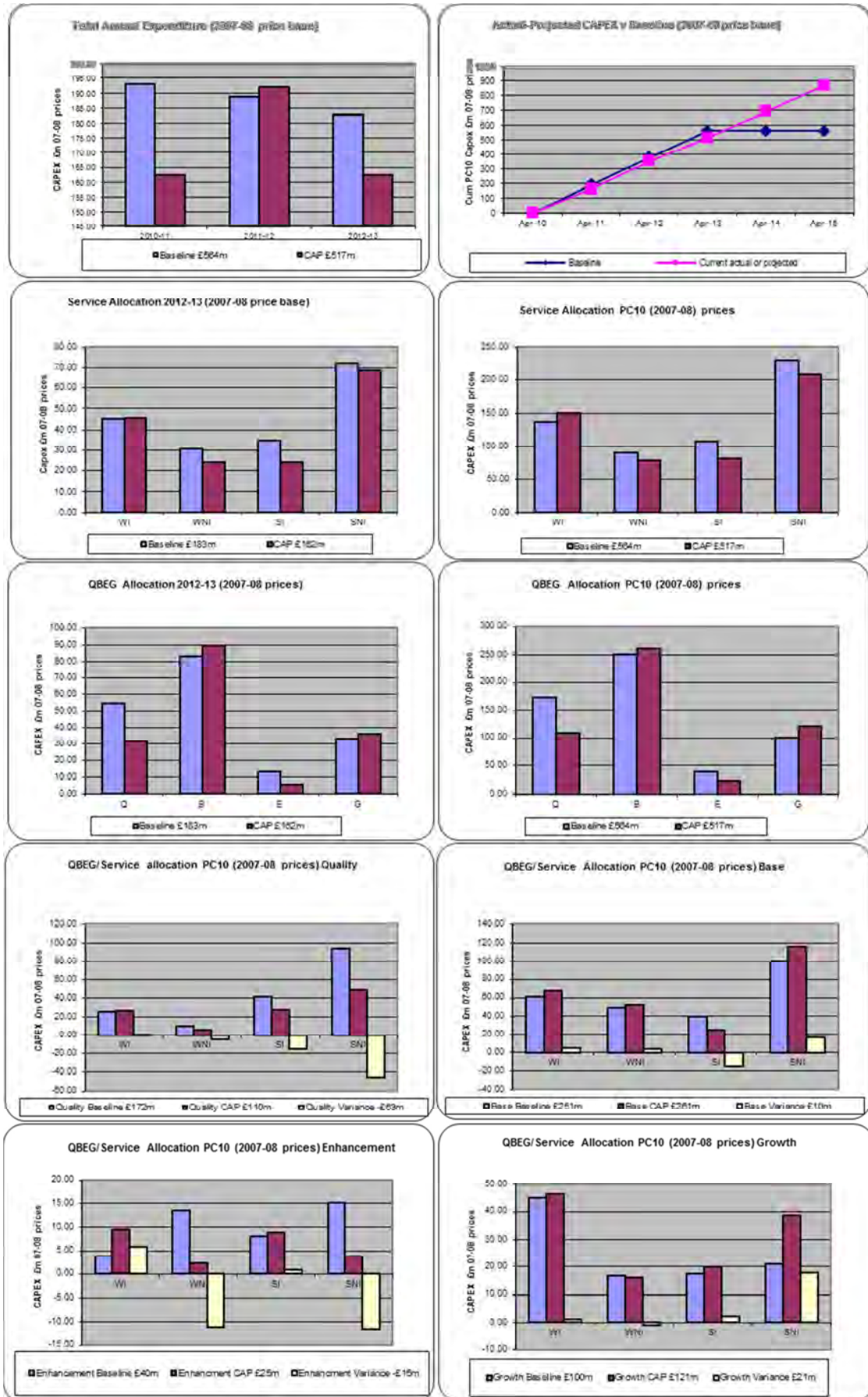
Management Adjustments

At year end for PC10 the management adjustment for PC10 is zero. As the representation of a live programme for PC13 there is a significant over profile within the CAPEX spend for NI Water. This accommodates the need to control expenditure and meet year end targets. The total management adjustment as currently presented is £10.4m in 2013/14 and £20.0m in 2014/15. This represents approximately 10% of the total expenditure for PC13.

1.11 Regulatory Dashboard

A regulatory dashboard for NI Water's CAPEX spend as reported in the Q4 2012/13 CIM has been developed and is presented in Figure 2.

Figure 2: 2012-13 Q4 CIM template. Current Actual COPI = 1 as per MOU agreement



ANNEX A

Program me Code	Title	Baseline £m				Current Actual	PC10 Investment Profiles				PC13 Baseline (nominal)			PC13 Investment Profiles		
		10/11	11/12	12/13	Total		10/11	11/12	12/13	Total PC10	13/14	14/15	Total PC13	13/14	14/15	Total PC13
0	Staff salaries and on-costs	9.61	9.60	9.14	28.35	11.091	9.061	9.436	11.091	29.59	10.055	10.015	20.07	10.984	10.984	21.97
1	Base maintenance (Water)	7.13	5.60	6.42	19.16	3.416	0.652	3.528	3.416	7.60	3.819	4.278	8.10	2.373	1.829	4.20
2	Base maintenance (Sewerage)	18.09	23.23	24.59	65.91	20.816	3.217	25.187	20.816	49.22	11.091	7.860	18.95	23.556	8.598	32.15
3	Water resources	2.50	0.56	1.97	5.02	3.738	0.480	3.356	3.738	7.57	1.796	0.229	2.02	1.914	0.848	2.76
4	Water treatment works	4.26	0.06	0.06	4.38	0.179	4.428	1.008	0.179	5.62	2.138	1.976	4.11	0.156	9.000	9.16
5	Water trunk mains	5.67	5.04	5.51	16.22	4.443	14.226	9.765	4.443	28.43	11.380	15.747	27.13	13.888	14.096	27.98
6	Service reservoirs and clear water tanks	5.14	2.79	5.55	13.48	1.163	6.982	0.846	1.163	8.99	0.849	0.784	1.63	0.544	1.749	2.29
7	Service reservoir rehab	2.22	4.66	2.83	9.72	0.280	2.109	0.217	0.280	2.61	4.613	3.557	8.17	3.373	4.990	8.36
8	Water mains rehabilitation	30.81	29.99	29.35	90.15	29.401	23.480	38.204	29.401	91.09	25.192	25.574	50.77	24.954	25.812	50.77
23	Water Mains new and replacement					1.128	0.927	-1.062	1.128	0.99	3.737	3.014	6.75	2.364	3.000	5.36
9	Leakage	3.23	3.23	3.23	9.69	3.186	3.199	3.379	3.186	9.76	3.065	2.964	6.03	3.090	3.090	6.18
10	Ops capital Water (Base)	3.30	3.49	2.95	9.74	7.948	7.566	9.120	7.948	24.63	7.946	7.914	15.86	8.747	8.747	17.49
11	Named sewerage projects	5.03	0.00	0.00	5.03	0.114	5.122	4.165	0.114	9.40	0.000	0.000	0.00	0.003	0.000	0.00
12	Sewerage Maintenance, Flooding and DG5	21.74	33.35	28.30	83.39	13.027	15.512	17.174	13.027	45.71	20.890	19.482	40.37	18.470	30.872	49.34
24	Sewerage - Development and ad-hoc repairs					4.281	2.669	3.243	4.281	10.19	3.829	3.804	7.63	3.949	5.429	9.38
15	Wastewater treatment (carry over projects)	37.92	6.30	0.03	44.25	4.898	32.027	16.094	4.898	53.02	1.473	1.576	3.05	1.895	0.522	2.42
16	Wastewater treatment (new starts)	4.77	17.45	14.24	36.46	24.136	7.230	13.396	24.136	44.76	25.165	17.650	42.81	25.199	20.200	45.40
17	Small wastewater treatment works	4.16	4.14	4.13	12.43	3.434	8.866	8.007	3.434	20.31	5.317	2.025	7.34	5.296	2.000	7.30
18	Ops Capital Sewerage (base)	5.40	5.24	4.76	15.40	8.732	6.390	8.976	8.732	24.10	7.794	7.745	15.54	8.636	8.636	17.27
19	Metering	1.21	1.03	1.15	3.38	1.775	2.288	2.117	1.775	6.18	2.298	2.288	4.59	2.300	2.300	4.60
20	M&G	18.14	17.83	17.25	53.22	15.083	5.798	15.875	15.083	36.76	13.327	12.905	26.23	15.918	13.241	29.16
25	Additional nominated outputs				38.88	0.000	0.000	0.000	0.000	0.00	2.180	4.482	6.66	0.000	0.000	0.00
	Reconciliation Adjustment	0.00	0.00	0.00	0.00		0.041	-0.023	0.000	0.02	0.012	0.011	0.02	-10.408	-20.064	-30.47
	Totals	190.34	173.60	161.43	564.25	162.269	162.270	192.008	162.269	516.55	167.967	155.879	323.85	167.201	155.879	323.08

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		5		6			
			REPORTING YEAR	CG	REPORTING YEAR	CG	REPORTING YEAR	CG	REPORTING YEAR	CG	REPORTING YEAR	CG	REPORTING YEAR	CG		
			2007-08		2008-09		2009-10		2010-11		2011-12		2012-13			
A LOST TIME DUE TO SICKNESS AND ACCIDENTS AND INCIDENCE OF OCCUPATIONAL ILL HEALTH																
1	Employee total	nr	0		1,677	A2	1,579	A2	1,388	A2	1,316	A2	1,317	A2	1,304	A2
2	Total days lost due to sickness, accident and occupational ill health	nr	0		18,882	A2	17,170	A2	10,873	A2	9,953	A2	8,510	A2	9,081	A2
3	Total days lost - rate per 1000 employees	nr	2		11,259.39	A2	10,873.97	A2	7,833.57	A2	7,563.07	A2	6,461.66	A2	6,963.96	A2
4	Number of incidents of occupational ill health	nr	0		172	A2	250	A2	147	A2	135	A2	144	A2	137	A2
5	Incidents of occupational ill health - rate per 1000 employees	nr	2		102.56	A2	158.00	A2	105.91	A2	102.58	A2	109.34	A2	105.06	A2
B RIDDOR REPORTS																
6	Total RIDDOR incidents	nr	0		16	A1	11	A1	11	A1	4	A1	4	A1	10	A1
7	RIDDOR - rate per 1000 employees	nr	2		9.54	A1	6.97	A1	7.93	A1	3.04	A1	3.03	A1	7.67	A1
8	3-day accident rate per 1000 employees	nr	2		9.54	A1	11.00	A1	7.93	A1	3.04	A1	3.03	A1	7.67	A1
9	Major/fatal accident rate per 1000 employees	nr	2		0.00	A1	6.97	A1	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		N/C		N/C		No data		No data		No data	
11	Total days lost due to sickness, accident and occupational ill health	nr	0		N/C		N/C		N/C		No data		No data		No data	
12	Total days lost - rate per 1000 employees	nr	2		N/C		N/C		N/C		No data		No data		No data	
13	Number of incidents of occupational ill health	nr	0		N/C		N/C		N/C		No data		No data		No data	
14	Incidents of occupational ill health - rate per 1000 employees	nr	2		N/C		N/C		N/C		No data		No data		No data	
D CONTRACTORS' RIDDOR REPORTS																
15	Total RIDDOR incidents	nr	0		N/C		N/C		7 + 1 (DO)	B2	7	B2	2	B2	6	B2
16	RIDDOR - rate per 1000 contractors' employees	nr	2		N/C		N/C		N/C		No data		No data		No data	
17	3-day accident rate per 1000 contractors' employees	nr	0		N/C		N/C		N/C		No data		No data		No data	
18	Major/fatal accident rate per 1000 contractors' employees	nr	2		N/C		N/C		0.00	A2	0.00	A2	0.00	B2	0.00	B2

Table 41 – Health and Safety Information (NIW only)**Lines 1-5 - Lost Time**

In 2012/13 financial year NI Water lost a total of 9081 working days due to sickness which was equivalent to 7 working days lost per employee. The KPI attendance in 12/13 was 96.7% and NI Water delivered an actual rate of 96.8%.

Restructuring continued during 2012/13 which resulted in 54 employees (52.41 FTE as 4 were part time staff) leaving through a voluntary early severance/retirement (VER/VS) package.

In April 2012, 12 staff transferred under TUPE from Northgate Industrial Services to NI Water ICT Directorate.

HR Advisors in conjunction with Line Managers continue to meet with staff who have breached sick absence trigger points to highlight the importance of good attendance. 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.

Psychiatric/psychological was the highest reason for days lost due to sickness in 2012/13 at 19.3%. However, this has reduced considerably from 11/12 which was 27.6%. 31.2% of the days lost due to Psychiatric/psychological illness was solely work related compared to 46.6% in 11/12.

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.

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 2011 (approved at Standing Committee April 2011). 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 10 RIDDOR reportable incidents within NIW in 2012/13 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. NI, on further investigation it was found that 3 of the above were found not to be directly related to work activity and 1 which was initially indicated to be Weill's disease was found to be a non-work related medical condition.

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 (ref. Line 1, Table 41) as 1304. This gives the RIDDOR rate per 1000 employees as 7.67 for 2012/13.

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 2012/13.

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 2012/13, 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 2012/13 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. The confidence grade has been changed since 2009/10 submission to B2 following recommendation from Reporter following that submission.

NIW has, however, continued to monitor the numbers of contractor's RIDDOR incidents and major/fatal accidents where they have occurred

There were 6 RIDDOR accidents and 0 Dangerous Occurrences reported.

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.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN- TABLE 42 PPP REPORTING
 PPP REPORTING
 REPORTING YEAR 2012-2013

DESCRIPTION	UNITS	DP	CG	Corresponding Report	Calculation	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	
A PROJECT DESCRIPTION																											
1	PPP Concession	text	na	na	na	Apha	Apha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Kinnegar	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Alpha	Kinnegar	Omega	Water	Sewerage
2	Service Area	text	na	na	na	WT	WT	WT	WT	WD	WD	WD	WD	WWT	WWT	WWT	WWT	WWT	WWT	WWT	WWT	All	All	All	Service	Service	
3	Name of works	text	na	na	na	Ba irees	Castor Bay	Dunore Point	Moyola	DBFO LM & FKd BDG Cont TK	Ballymoney LM	L mavyady LM	Kinnegar	Richhill	Armagh	Ballymacor	North Down	Ballyrickard	Ballymacor Lagoons	Ballymacor	Duncluce	Sludge Service	Total	Total	Total	Total	Total
4	Commencement date	date	na	na	na	10/10/2008	09/12/2008	11/12/2008	16/09/2008	16/12/2008	15/10/2008	15/10/2008	24/05/2001	08/04/2009	27/08/2009	14/11/2009	05/05/2008	20/04/2009	N/A	31/03/2010	31/03/2010	31/03/2010					
5	Service duration	yrs	0	na	na	23	23	23	23	23	23	23	N/A	23	23	22	24	23	N/A	22	22						
6	Service completion date	date	na	na	na	30/05/2031	30/05/2031	30/05/2031	30/05/2031	30/05/2031	30/05/2031	N/A	N/A	23/04/2024	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	07/03/2032	
B PAYMENT TO PPP CONCESSIONAIRE																											
7	Unitary Charge Capacity	€m	3	na	na																						
8	Unitary Charge Variable	€m	3	na	na																						
9	Unitary Charge Deductions	€m	3	na	na																						
10	Atypical expenditure	€m	3	na	na																						
11	Efficiency Gains, included in 7 & 8	€m	3	na	na																						
12	Total PPP Payments (7to 10)	€m	3	na	Sum 7 to 10																						
13	Capital repayment	€m	3	na	na																						
14	Maintenance	€m	3	na	na																						
15	Residual interest	€m	3	na	na																						
16	Atypical payments capitalised	€m	3	na	na																						
17	Total capitalised (13 to 16)	€m	3	na	Sum 13 to 16																						
18	Total PPP Expensed (12-17)	€m	3	na	Lines 12-17																						
19	Interest	€m	3	na	na																						
20	Total PPP Opex (18-19)	€m	3	na	Line 18-19																						
C WATER DISTRIBUTION DATA																											
21	Distribution input	Mld	2	B2	Table 10 Lne 26	26.9	98.5	97	14.2																		
21a	Water Treatment Works Capacity	Mld	0	A1		50	147	180	19																		
22	Length of mains	km	2	A2	Table 11 Lne 12					16.42																	
D WATER RESOURCE AND TREATMENT DATA																											
23	Turbidity 95% le greater or equal to 0.5NTU	1/0	0	A2	Table 11a Line 1	0	0	0	0	0																	
24	Turbidity 95% le less than 0.5NTU	1/0	0	A2	Table 11a Line 2	1	1	1	1	1																	
25	Source Type	text		A1	Table 12 Block A	IR x 2 + River	River	River	River	River	N/A																
26	Treatment type	text		A1	Table 12 Block B	W4	W4	W4	W4	W4	N/A																
27	Average pumping head	m hd	1	B3	Table 12 Block A	130.0	147.0	174.0	146.0	N/A																	
E SEWERAGE DATA																											
28	Total length of sewer	km	2	B2									0.00	0.09	0.20	0.20	10.63	1.00									
29	Total length of critical sewer	km	2	B2									0.00	0.09	0.00	10.50	10.63	1.00									
F SEWAGE TREATMENT AND DISPOSAL DATA																											
30	Population equivalent of total load received	000	0	B2	Table 17b line 2								73	3	21	102	71	30									
31	Load received by STW's	kg BOD/day	0	B2	Table 17d								4393	196	1252	6148	4286	1793									
32	Suspended solids consent	mg/l	0	A1	Table 17b line 3								45/150	20/50	20/50	35/	35/90	10/30									
33	BOD5 consent	mg/l	0	A1	Table 17b line 4								25/80	7/90	8/30	25/50	25/50	10/35									
34	COD consent	mg/l	0	A1	Table 17b line 5								125	125	125	125	125	125									
35	Ammonia consent	mg/l	0	A1	Table 17b line 6								N/A	2/10	2/10	7.5/32	N/A	N/A									
36	Phosphates consent	mg/l	0	A1	Table 17b line 7								N/A	N/A	<1 Ann Avg	<1 Ann Avg	N/A	N/A									
37	Classification of Treatment Works	text		A1	Table 17b line 8								SAS	TA1	TA2	TA2	TA2	TA2									
38	Size band of sewage treatment works	nr	0	B3	Table 17c								6	4	5	6	6	6									
G SLUDGE TREATMENT AND DISPOSAL DATA																											
39	Total sludge imported from NI Water	tids	3	B2									0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.013	26.255	31.269					
40	Sludge produced by the PPP facility	tids	3	B2									0.726	0.065	0.535	2.069	1.628	1.158	0.000	0.000	0.000	0.000	0.000	0.726	5.454	6.180	
41	Sludge exported to Duncluce Incinerator	tids	3	B2									0.726	0.065	0.535	2.069	1.628	1.158	0.000	0.000	0.000	0.000	0.000	0.726	5.454	6.180	
42	Sludge exported to other PPP facilities	tids	3	A1									0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
43	Sludge exported to NI Water	tids	3	A1									N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
44	Sludge disposed of from site to - Farmland Untreated	tids	3	B2	Table 17G Col 1								N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
45	Sludge disposed of from site to - Farmland Conventional	tids	3	A1	Table 17G Col 2								N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
46	Sludge disposed of from site to - Farmland Advanced	tids	3	B2	Table 17G Col 3								N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
47	Sludge disposed of from site to - Incineration	tids	3	B2	Table 17G Col 4								N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
48	Sludge disposed of from site to - Landfill	tids	3	A1	Table 17G Col 5								0.022	0.002	0.007	0.044	0.017	0.015	N/A	N/A	N/A	N/A	N/A	0.022	0.108	0.128	
49	Sludge disposed of from site to - Composted	tids	3	B2	Table 17G Col 6								N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0.000	0.000	
50	Sludge disposed of from site to - Land Reclamation	tids	3	B2	Table 17G Col 7								N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.549	0.000	0.549	
51	Sludge disposed of from site to - Other (Willow Coppice)	tids	3	B2	Table 17G Col 8								N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.515	0.000	0.515	
52	Sludge disposed of from site - Total	tids	3	B2	Table 17G Col 9								N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	37.471	0.022	37.556	

Table 42 – PPP Reporting**Service Dates**

No Change

Contracted Adjustments to Payment Mechanisms

Omega: The Company has notified a change in the requirements for Faecal Coliform performance at North Down Ards WWTW in line with its contractual entitlement. This has resulted in the predetermined [REDACTED] reduction in Unitary Charge on every day outside of the regulatory Bathing Season coming into effect since September 2011.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Changes to the Contracts**• Omega Supplemental Agreement 3**

This was executed on August 2011 to clarify the sludge performance requirements and deal with commercial matters surrounding uncertainty of sludge services performed in AIR11 period.

• Omega Supplemental 4

This was executed just inside the current Reporting Period (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.

• Kinnegar Supplemental Agreement 2:

This commercial agreement resolved historical disputed payments, along with effecting 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 Deed of Variation No.3:

Amended and restated the contract in respect of all previous changes and corrections made to date.

[REDACTED]

[REDACTED]

- [REDACTED]

[REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

[REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

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 has been a minor change to the descriptive reports on the PPP Contracts where the Omega contractor has deployed a centrifuge at Duncrue St Sludge Facility to assist during upgrade work to the existing assets on the site. The Company notes the NIAUR claims not to have received copies of the reports originally dispatched in 2010, and has therefore reissued all scheme Reports in full for completeness.

[REDACTED]

[Redacted]

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 2011/12.

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 2011/12 driven by a combination of inflation and flow variations in the year.

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[REDACTED]

[REDACTED]

- [REDACTED]
- [REDACTED]

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]

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 2012/13 against the baseline contract at award:

[Redacted content]

Line 13 - Capital Repayments

[Redacted content]

	Per Model Capital £k	Capital Maintenance £k	Total £k	Capital Repayment £k	Interest £k	EIB Step-down £k	Net Interest £k
				23.4%	76.6%		
Castor Bay	█	█	█	█	█	█	█
Dunore Point	█	█	█	█	█	█	█
Ballinrees	█	█	█	█	█	█	█
Moyola	█	█	█	█	█	█	█
Limavady LM	█	█	█	█	█	█	█
Ballymoney LM	█	█	█	█	█	█	█
DBFO LM	█	█	█	█	█	█	█
	█	█	█	█	█	█	█

(The above table is an extract from an excel spreadsheet with totals based on rounded values)

Line 14 - Capital Maintenance

Capital maintenance carried out at Alpha sites during the year – figure supplied by Dalriada Water.

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

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

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 25 – Source Type

This data has changed 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 12. The changes have been reflected in Table 12.

Line 27- Average Pumping Head

The APH for 'Alpha Total' and 'Water Services Total' has changed to reflect the changed requirements of Table 42 Line 27 guidance notes, wherein the Company is no longer required to use its total Distribution Input as the denominator, rather use the PPP Distribution Input utilised in AIR12. This has resulted in a significant change in data entry value.

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 STWs

Variation in calculated load stems from variation in the measured sewage loads delivered to the sites through the Company's sewer network.

Line 39 – Total Sludge Imported from NIW

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 31.269 TTDS (last year the figure was 30.680 TTDS).

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 AIR12.

The variations are tabulated below;

PPP Production	AIR13	AIR12	AIR11	AIR10
Armagh WWTW	0.535	0.570	0.759	0.84
Richhill WWTW	0.065	0.066	0.213	0.21
Ballynacor WWTW	2.069	3.330	2.468	2.29
Ballyrickard WWTW	1.158	1.225	1.627	1.717
NDA WWTW	1.628	1.559	1.753	1.654
Kinnegar WWTW	0.726	0.823	0.792	0.7
Omega Screenings and Grit	0.106			
Kinnegar Screenings and Grit	0.022			
Totals	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.

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.
- (iii) The loads delivered to the PPP contractor from the NI Water sewer network, outside the PPP contractor's control.
- (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

Variations are accounted for in Line 40 commentary above.

Line 44 – Sludge Disposed of from Site – Farmland Untreated

Nil disposal arising from the Contractor's choice of alternative compliant disposal routes.

Line 45 – Sludge Disposed of from Site – Farmland Conventional

Nil disposal, arising from the Contractor's choice of alternative compliant disposal routes.

Line 46 – Sludge Disposed of from Site – Farmland Advanced

Nil disposal, arising from the Contractor's choice of alternative compliant disposal routes when incineration was unavailable over a considerable period of the year.

Line 47 – Sludge Disposed of from Site – Incineration

A full year service resulted in 36.386 TTDS being incinerated as the contractor's preferred method of disposal, being considerably larger than AIR12 when both incinerators were out of commission for prolonged periods.

Line 48 – Sludge Disposed of from Site – Landfill

A full year service resulted in 0 TTDS arising from the Contractor's choice of alternative compliant disposal routes. However, reporting now includes both PPP Contractors sludges arising from grit and screenings, being in total 0.128TTDS.

Line 49 – Sludge Disposed of from Site – Composted

A full year service resulted in 0 TTDS arising from the Contractor's choice of alternative compliant disposal.

Line 50 – Sludge Disposed of from Site – Land Reclamation

A full year service resulted in 0.549 TTDS arising from the Contractor's choice of alternative compliant disposal routes.

Line 51 – Sludge Disposed of from Site – Other

A full year service resulted in 0.515 TTDS arising from the Contractor's choice of alternative compliant disposal routes.

Table 43 - PPP Reporting – Operational Costs

Note: As the Alpha atypical expenditure and the performance deductions and residual interest in 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 AIR12 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:

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

Kinnegar

The data is provided as an aggregate of the monthly invoiced amounts by the Contractor to the Company. [REDACTED]

Omega

The data is provided as an aggregate of the monthly invoiced amounts by the Contractor to the Company in respect of the Services. [REDACTED]

In addition this line includes atypical amounts as follows:

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

Line 5 – Payment by Concessionaire to Operating Company

Alpha

This figure is equal to the figure quoted in Line 22a of Table 21. This figure will vary from year to year depending upon volumes of water dispatched, changes in the volumetric charge, deductions incurred and indexation.

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.

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.

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. [REDACTED]

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 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. Costs on this line have increased for AIR13 as a result of the increased energy tariffs and variations in the actual consumption.

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		5		6	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	2011-12	CG	2012-13	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
2	Properties below reference level at end of year	nr	0						2020	B3	1,748	B3	1,420	B3
3	% of total properties at risk of low pressure (OPA Low pressure value)	%	2						0.25	B3	0.22	B3	0.17	B3
DG3 PROPERTIES AFFECTED BY UNPLANNED INTERRUPTIONS														
4	More than 6 hours	nr	0						476,289	B3	7,023	B3	10,487	B3
5	More than 12 hours	nr	0						214,274	B3	765	B3	2,607	B3
6	More than 24 hours	nr	0						40,959	B3	18	B3	1,554	B3
7	Total connected properties at year end	nr	0						806,444	C2	810,367	A2	817,960	A2
8	OPA supply interruption value	nr	2						95.79	B3	0.97	B3	1.98	B3
DRINKING WATER QUALITY														
9	% MZC Iron	%	2						97.60	A1	98.15	A1	97.36	A1
10	% MZC Manganese	%	2						99.69	A1	99.87	A1	99.83	A1
11	% MZC Aluminium	%	2						99.47	A1	98.77	A1	99.59	A1
12	% MZC Turbidity	%	2						99.95	A1	99.92	A1	99.70	A1
13	% MZC Faecal Coliforms	%	2						99.97	A1	99.96	A1	99.89	A1
14	% MZC Trihalomethanes	%	2						98.33	A1	99.29	A1	97.50	A1
15	Average Overall MZC figure (Drinking Water Quality OPA value)	nr	2						99.17	A1	99.33	A1	98.98	A1
B SEWERAGE SERVICE														
DG5 SEWER FLOODING - OVERLOADED														
16	Flooding incidents in the year (overloaded sewers)	nr	0						10	B3	15	B2	189	B2
17	Flooding incidents (overloaded sewers attributed to severe weather)	nr	0						4	B3	1	B2	181	B2
18	Number of domestic properties connected to sewerage system	000	1						612.1	C2	618.5	A2	623.3	A2
19	% of domestic properties flooded by overloaded sewers (Overloaded sewers OPA value)	%	4						0.0010	C2	0.0023	B2	0.0013	B2
DG5 SEWER FLOODING - OTHER CAUSES														
20	Flooding incidents (other causes - equipment failures)	nr	0						4	B3	4	B2	15	B2
21	Flooding incidents (other causes - blockages)	nr	0						14	B3	17	B2	22	B2
22	Flooding incidents (other causes - collapses)	nr	0						10	B3	2	B2	4	B2
23	Number of domestic properties connected to sewerage system	000	1						612.1	C2	618.5	A2	623.3	A2
24	% of domestic properties flooded by other causes (Other causes OPA value)	%	4						0.0046	C2	0.0037	B2	0.0068	B2
DG5 PROPERTIES ON THE FLOODING REGISTER														
25	2 in 10 register at end of year	nr	0						6	B4	17	B2	30	B2
26	Removed by company action	nr	0						0	B4	23	A1	20	A1
27	1 in 10 register at end of year	nr	0						3	B4	10	B2	10	B2
28	Number of domestic properties connected to sewerage system	000	1						612.1	C2	618.5	A2	623.3	A2
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
C SECURITY OF SUPPLY														
DG4 HOSEPIPE RESTRICTIONS														
30	Hosepipe restrictions (OPA value)	%	0						0.0	A1	0	A1	0	A1
LEAKAGE														
31	Leakage (Target)	nr	2						175.00		171.00		168.00	
32	Leakage (Actual)	nr	2						176.97	B4	168.32	B4	161.75	B4
33	% of leakage target not met (Leakage OPA value)	nr	2						1.79	B4	1.33	B4	0.00	B4
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
SECURITY OF SUPPLY - PERFORMANCE AGAINST TARGET														
35	Security of supply index - planned (target) levels of service	nr	0						97	A2	100	A2	100	A2
36	Security of supply index - company's actual based on planned level of service	nr	0						97	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
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
39	Total billing contacts	nr	0						104,897	B3	92,832	B2	77,051	B2
40	% of billing contacts answered within 5 working days (DG6 OPA value)	%	2						98.87	B3	99.97	B2	100.09	B2
DG7 - RESPONSE TO WRITTEN COMPLAINTS														
41	Total written complaints	nr	0						4,327	B2	2,340	B2	3,173	B2
42	Number dealt with within 10 working days	nr	0						4,326	B2	2,323	B2	3,166	B2
43	% of written complaints answered within 10 working days (DG7 OPA value)	%	2						99.98	A1	99.27	A1	99.78	A1
DG8 - BILLING METERED CUSTOMERS														
44	Company or customer readings (or both)	nr	0						65,156	A1	66,057	A1	66,622	A1
45	Total metered accounts	nr	0						100,071	A1	103,876	A1	110,164	A1
46	Metered accounts excluded from indicator	nr	0						32,275	A1	36,388	A1	42,688	A1
47	% of metered accounts which have meter based bills (DG8 OPA value)	%	2						96.11	A1	97.88	A1	98.73	A1
DG9 TELEPHONE CONTACT														
48	Total of calls not abandoned	nr	0						300,722	A2	229,270	A2	216,006	A2
49	Total calls received on customer contact lines	nr	0						340,989	A2	231,245	A2	219,399	A2
50	% calls not abandoned (0.25 of DG9 OPA value)	%	2						88.19	A2	99.15	A2	98.45	A2
51	All lines busy	nr	0						699,566	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
53	Call handling satisfaction (0.5 of DG9 OPA value)	nr	2						4.59	A1	4.57	A1	4.54	A1
E ENVIRONMENTAL PERFORMANCE														
POLLUTION INCIDENTS														
54	Number of High & Medium category pollution incidents (Sewage)	nr	0						45	A1	44	A1	18	A1
55	Equivalent population served (resident)	000	2						2,115.82	C5	2,126.74	C5	2,107.96	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
57	Number of Low category pollution incidents (Sewage)	nr	0						217	A1	202	A1	163	C5
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
59	Number of High & Medium category pollution incidents (Water)	nr	0						1	A1	0	A1	0	A1
60	Winter population	000	2						1,814.34	C2	1,823.89	C2	1,842.61	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
SEWAGE - SLUDGE DISPOSAL														
62	Percentage unsatisfactory sludge disposal (Sludge disposal OPA value)	%	2						0.00	A2	0.00	A2	0.00	A2
SEWERAGE SERVICE - BREACH OF CONSENT														
63	WWTW Discharge consent % compliance (WWTW compliance OPA value)	%	2						4.63	C5	3.56	C5	1.10	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		PPP		NIW Total		
			2012-13	CG	2012-13	CG	2012-13	CG	
A ELECTRICITY CONSUMPTION									
1	Grid electricity purchased (excluding renewable energy)	MW.hr	0	179,197	A1	79,811	A1	259,008	A1
2	Grid electricity purchased - renewable energy	MW.hr	0	35,879	A1	3,688	A1	39,567	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	333	A1	110	A1	443	A1
5	Total electricity consumption	MW.hr	0	215,409	A1	83,609	A1	299,018	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	1,206	A1	0	A1	1,206	A1
8	Total renewable energy generated	MW.hr	0	1,539	A1	110	A1	1,649	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	2,907	B3	7,307	B3	10,213	B3
10	Process and fugitive emissions	t.CO ₂ e	0	0	B3	3,839	B3	3,839	B3
11	Transport: company owned or leased vehicles	t.CO ₂ e	0	3,343	B3	238	B3	3,581	B3
B.2 Scope 2 Emissions									
12	Total grid energy used (including CHP electricity purchased).	t.CO ₂ e	0	103,294	A2	52,076	A2	155,369	A2
B.3 Scope 3 Emissions									
13	Business travel on public transport and private vehicles used for company business	t.CO ₂ e	2	0.00	CX	0.84	CX	0.84	CX
14	Outsourced activities (if not included in Scope 1 or 2) Energy and other	t.CO ₂ e	2	0.00	CX	11,166.86	CX	11,166.86	CX
15	Not used								
16	Not used								
17	Gross operational emissions	t.CO ₂ e	0	109,544	A3	74,626	A3	184,170	A3
C Net annual operational emissions									
18	Exported renewables (generated on-site and exported)	t.CO ₂ e	2	-627.39	A1	0.00	A1	-627.39	A1
19	Green tariff electricity purchased	t.CO ₂ e	2	-2613.84	A1	-268.65	A1	-2,882.49	A1
20	Net operational emissions	t.CO ₂ e	0	106,302	A2	74,358	A2	180,660	A2
D ANNUAL OPERATIONAL GHG INTENSITY RATIO VALUES									
21	Operational GHG per MI of treated water	t.CO ₂ e/MI	3	0.323	B2	0.352	B2	0.335	B2
22	Operational GHG per MI of sewage treated (flow to full treatment)	t.CO ₂ e/MI	3	0.646	CX	0.515	CX	0.586	CX
23	Operational GHG per MI of sewage treated (based on water distribution input)	t.CO ₂ e/MI	3	1.002	CX	0.800	CX	0.909	C4
E RENEWABLE INCENTIVES									
24	Revenue from renewable energy sales and incentives	£000	3	141.729	A2	0.000	A2	141.729	A2

Table 45 – Energy Consumption and Greenhouse Gas Accounting

Table 45 contains data relevant to the Company's energy consumption and greenhouse gas accounting as requested for the AIR 13 return. The Table 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. The Table reports emissions generated by the Company and outsourced PPP concessions working for the appointed business in carrying out any part of its regulated activities. The Table reports emissions generated by the Company and by outsourced PPP concessions in separate columns and also calculates a Company total.

Reporting Outputs

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 13.5% 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	333,291
Oaklands	188,685
Silent Valley	1,016,978
Incinerator	110,310

Further investigatory work is ongoing to enable installation of hydro and wind turbine systems at other sites within the current Regulatory period. Unfortunately due to operational difficulties and a damaged generator at Silent Valley turbine renewable generation is down from previous years.

The level of self generation is further complemented by procurement of renewable electricity from the SEM and this year's prediction for purchased renewable is currently in the region of 15% from good quality climate change levy exempt renewable sources. It is anticipated that this will move to 20-25% once the new electricity tender is awarded.

Lines 9 – 17 - Gross Annual Operational GHG Emissions

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) reports 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 (line20).

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	0.323	0.352	0.335	B2
Annual operational emissions intensity ratio per Ml of treated sewage (FFT)	tonnes CO ₂ e/ ML	0.646	0.515	0.586	CX
Annual operational emissions intensity ratio per Ml of treated sewage (DI Input)	tonnes CO ₂ e/ ML	1.002	0.800	0.909	C4

Calculations for the tonnes CO₂e/ML intensity ration have been generated from the UK Water Industry Carbon Accounting Workbook V6 outputs using data from AIR13 Table 10 and Table 14. The confidence grading for the FFT is at CX due to uncertainty over the accuracy of the data provided and lack of MCERT calibrated and approved flowmeters.

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 V6.

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 6 (March 2013) for greenhouse gas emissions associated with the provision of water, wastewater, sludge disposal, administrative function and transport in its AIR13 return.

Data sources for the AIR 13 return have been generated from supplier's monthly consumption figures associated with the use of electricity, gas and other fuels.

All energy conversions have been derived from the Carbon Accounting Workbook V6 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 V6.1

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 AIR13 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 AIR 13 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 AIR 11, AIR12 or AIR13 returns).

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 AIR13 reporting only if deemed in further discussion to have a material impact on the emissions level.



Annual Information Return 2013

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 2013: Section 7 – Levels of Service Methodology Appendix

DG2 – Pressure of mains water

- 1. Methods and procedures**
- 2. Extract from DG2 register**
 - provide an extract from DG2 register
- 3. Sources of information**
- 4. Scope and coverage**
- 5. Assumptions and exclusions**
 - including any assumptions made for surrogate for the reference level.
- 6. Other issues**
 - provide any further information on issues that have arisen in the report year that impact on your methodology for reporting in the Annual Information return.

The procedure for the investigation and recommendation for removal and addition of properties to the DG2 Register is based on the 'DG2 NIWL Procedures April 2010' document produced by the Leakage Data Management Unit. The objectives of the investigation are as follows:

- i. Removal/Addition of DG2 entries on the register as a result of more robust data being available (Better Information).
- ii. Removal/Addition of DG2 entries resulting from capital works and networks improvements (Company Action).
- iii. Investigation of customer 'Low Pressure' complaints.

1. Methods and Procedures

DG2 Investigations (excluding Rehab modelling)

The objective of a DG2 site investigation is to acquire the necessary data to allow a more detailed assessment to be carried out. The 2 key elements of this investigation are the logging of the water pressure and the gathering of accurate height data for both the logging point and DG2 property connection point. In keeping with 'DG2 NIWL Procedures April 2010' the following procedures are followed:

- Logging points are identified within the network, which do not exceed 250m in distance from the DG2 stopcock.
- The logging points are within the same DMA/PMA as the DG2 property.
- A unique logger ID is clearly assigned to the logging point.
- An accurate elevation of each logging point is provided using Real Time Kinematics (RTK) GPS. A value of 450mm is subtracted from this elevation to allow for the depth of the FH spindle.
- Logging point boundary polygons around the hydrants are digitised onto MapInfo to allow the associated properties to be assigned to the relevant logger.
- A pressure log and elevation may be taken in adjoining DMAs. This is to assist in identifying any potential for a BV change to improve the pressure at the DG2 property.
- A new ferrule elevation is produced for each property using Digital Elevation Model (DEM) 2008 data. The ferrule point value associated to each property

is used to determine the height used for that property within the Total Head calculation.

To assist with the site investigation, a detailed map is produced showing the following information:

- Pointer Property data showing elevation at each property (NIW receives biannual updates from Ordnance Survey Northern Ireland).
- Water pipes, fittings i.e. SVs, Fire Hydrants (FHs) terminating nodes etc.
- DMAs and PMAs (where applicable).
- Background Vector maps.
- Required pressure logging points.

Reporting

Following field testing and site investigation routines, all data is analysed and the findings are included within a Recommendation for Removal Report or alternatively a Recommendation for Inclusion Report.

1. The removal of entries due to robust data being available.
2. The removal of genuine entries resulting from infrastructure changes.
3. The provision of detailed information to support the inclusion of properties in the DG2 Register.

If the data collected verifies that properties that are in receipt of a pressure >15m, then the DG2 properties are recommended to NIW for removal. Properties removed are supported by a brief technical assessment based on pressure loggings, RTK GPS height data and other relevant factors including the required pressure logging trace/print out.

Where properties are discovered to have been positioned incorrectly within NIW GIS resulting in their inclusion in the original register, and repositioning indicated that these properties were in receipt of pressure > 15m, these DG2 properties are recommended for removal.

Those properties identified as being in receipt of a pressure <15m remain on the Register and a brief technical assessment based on pressure loggings, RTK GPS height data and other relevant factors, including the required pressure logging trace/print out, is provided. Prior to this information being provided a brief assessment is undertaken to determine if the properties could be transferred onto an adjoining DMA/PMA. This information is included within the assessment where deemed viable.

Additional properties within logging areas determined to be in receipt of pressure <15m are recommended for inclusion on the register. As above a brief technical assessment based on pressure loggings, RTK GPS height data and other relevant factors, including the required pressure logging trace/ print out, is provided. Prior to this information being provided a brief assessment is undertaken to determine if the properties could be transferred onto an adjoining DMA/ PMA. This information is included within the assessment where deemed viable.

The potential removal of properties due to networks improvements is investigated via rationalising adjacent DMA boundaries following pressure loggings as per guidelines

set out in the method statement above. All networks amendments follow the removal process and the submission of final reports leads to an update of the DG2 register.

DG2 Investigations by Rehab modelling

In the case of Rehabilitation schemes, PPRA reports associated with the various work packages are submitted to Asset Management Directorate for sign off and Leakage Function for processing in relation to the update of the DG2 Register. Leakage Data Management Unit on receipt of the suite of information including logger positioning site maps, accompanying logged data, PPRA reports and DG2 Investigation Reports align this data to the existing register. Checks are conducted on logged information to ensure compliance in terms that each logger site is within 250m of actual properties highlighted and that minimum pressures provided correlate to expected total head values. Hyperlinks are created for each set of logged data, map and report. The DG2 register is updated accordingly.

Investigation of customer 'Low Pressure' complaints

Where low pressure complaints have been identified through the contact centre, the process of action is as follows:

- Contact Centre informs customer of known network planned or unplanned events in the area or determines if problem may be with customer supply only.
- Networks' first responder visits property to determine if pressure is a legitimate complaint. If pressure at property is assessed as being a potential DG2 issue, the complaint is passed to Leakage DMU for investigation.

Leakage DMU undertakes an investigation in accordance with 'Methods and Procedures' above. Additions and removals are processed accordingly. The facility has been developed for regular monthly updates of all DG2 properties to be uploaded onto the CARtoMAP system which is utilised by the Contact Centre in relation to low pressure complaints from customers.

UPRN	Status Date	Status	Building Nr	Primary_Thorfare	Town	Postcode	County	DMA	Pressure
187100513	30-Nov-12	In Register	█	█	Ardglass	█	Down	Sentry Hill	13.47
185292371	30-Sep-12	In Register	█	█	Ardglass	█	Down	Loughrans Tower	14.97
185292234	30-Sep-12	In Register	█	█	Ardglass	█	Down	Loughrans Tower	13.87
185292230	30-Sep-12	In Register	█	█	Ardglass	█	Down	Loughrans Tower	14.12
185290343	30-Sep-12	In Register	█	█	Ardglass	█	Down	Sentry Hill	13.07
185778557	30-Sep-12	In Register	█	█	Ardglass	█	Down	Loughrans Tower	14.79
185292251	30-Sep-12	In Register	█	█	Ardglass	█	Down	Loughrans Tower	13.90
185292239	30-Sep-12	In Register	█	█	Ardglass	█	Down	Loughrans Tower	14.01
185292245	30-Sep-12	In Register	█	█	Ardglass	█	Down	Loughrans Tower	13.82
185292368	30-Sep-12	In Register	█	█	Ardglass	█	Down	Loughrans Tower	14.71
185292366	30-Sep-12	In Register	█	█	Ardglass	█	Down	Loughrans Tower	14.86
185292364	30-Sep-12	In Register	█	█	Ardglass	█	Down	Loughrans Tower	14.89
185292362	30-Sep-12	In Register	█	█	Ardglass	█	Down	Loughrans Tower	14.95
185292259	30-Sep-12	In Register	█	█	Ardglass	█	Down	Loughrans Tower	14.06
185292258	30-Sep-12	In Register	█	█	Ardglass	█	Down	Loughrans Tower	13.82
185292257	30-Sep-12	In Register	█	█	Ardglass	█	Down	Loughrans Tower	13.89
185207712	31-Aug-12	In Register	█	█	Donaghadee	█	Down	Portavoe Donaghadee	7.94
185207711	31-Aug-12	In Register	█	█	Donaghadee	█	Down	Portavoe Donaghadee	8.07
185207710	31-Aug-12	In Register	█	█	Donaghadee	█	Down	Portavoe Donaghadee	8.44
185207709	31-Aug-12	In Register	█	█	Donaghadee	█	Down	Portavoe Donaghadee	8.65
185207714	31-Aug-12	In Register	█	█	Donaghadee	█	Down	Portavoe Donaghadee	7.51
185207715	31-Aug-12	In Register	█	█	Donaghadee	█	Down	Portavoe Donaghadee	7.43

3. Sources of information

For AIR13 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 2011/12 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 AIR13 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

For a planned interruption the start time is the time at which water is unavailable at the first cold tap in a property; for an unplanned interruption it is when customers first notice the loss of supply or if this information is not available the time a 'no water' complaint is logged by the Customer Relation Centre.

3.3 End Time Determination

- **Opening of Valves**

NI Water records two times associated with the end of an interruption:

1. Supplies Restored Time
2. All Properties Restored Time

The **Supplies Restored Time** is taken as the time at which the main supplying valve is opened. A Work Order is generated to cover a 'Valving On' standard job. Details of the Work Order including the 'Valve On' Time are recorded in the Ellipse database, the company's Mobile Work Management System.

The **All Properties Restored Time** represents the **End Time** of an interruption and is in keeping with the regulatory definition below:

'End Time is when the company is satisfied that water has been fully restored to an acceptable pressure to the affected properties.'

In the majority of cases, the opening of the main supplying valve will result in the end of an interruption and there will be no difference between the Supplies Restored Time and the All Properties Restored Time.

When a large area is affected by an interruption, the Company aims to verify the time at which supplies are restored to each group of properties where there is a meaningful time difference e.g. >30 minutes. In such cases, the time between the Supplies Restored Time and the All Properties Restored Time represents the time taken to fully charge the main and to clear any problems that may have prevented the restoration of supplies to all properties, excluding problems associated with customers' own supply pipes (where this can be proved).

Other Methods Used to Determine the End Time

When it is evident that the Supplies Restored Time and estimated mains charging time has not provided a reliable End Time, Field Managers may use alternative methods to determine the end of an interruption.

- **Telemetry / Modelling Data**

Field Managers may obtain information from the Telemetry Data Management System (TDMS) to help determine the End Time more accurately.

- **Customer Visits**

The End Time may be determined by visiting customers to confirm that supply has been restored.

- **Flow / Pressure Measurement**

The End Time may be determined by checking flows and pressures via hydrants to ensure a main has been charged.

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 Records of numbers of properties affected

The number of properties affected by an interruption should be determined by the most accurate means available at the time of:

- a) the interruption; and
- b) 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.

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 [REDACTED]

TCC E-mail Addresses:-

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

- Altnagelvin Telemetry Control Centre [REDACTED]
[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

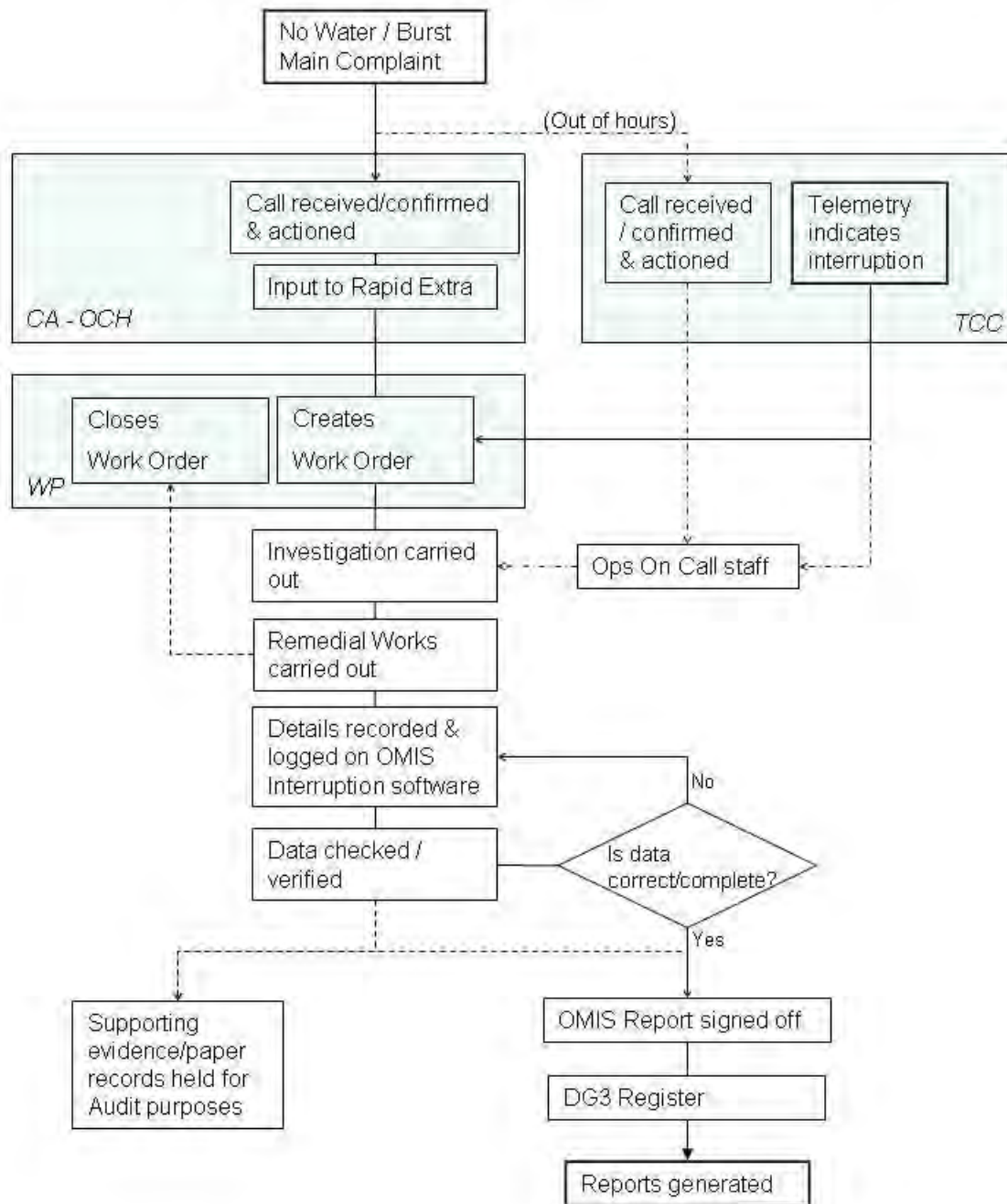
- Approves OMIS Interruptions Register and release data for reporting purposes.

Regulation & Business Performance Section

- Submit Annual Report to NIAUR.

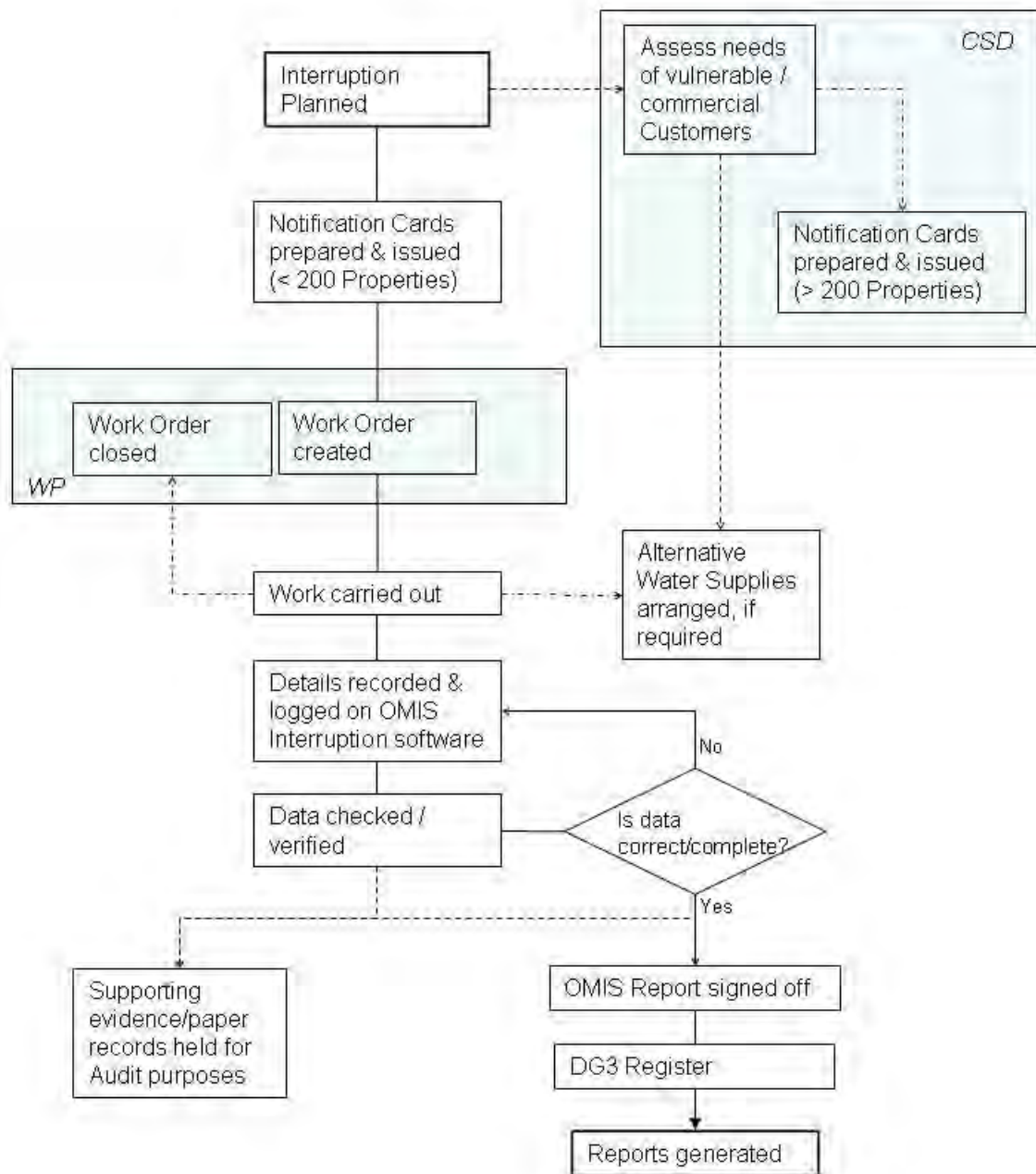
DG3 Process Flow Diagram - Unplanned

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	
Interruption Start	<input type="text"/>	<input type="text"/>	
Supply Restored	<input type="text"/>		
All Properties Restored	<input type="text"/>	Length Of ITS (Hrs)	Overrun (Hrs)
		<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

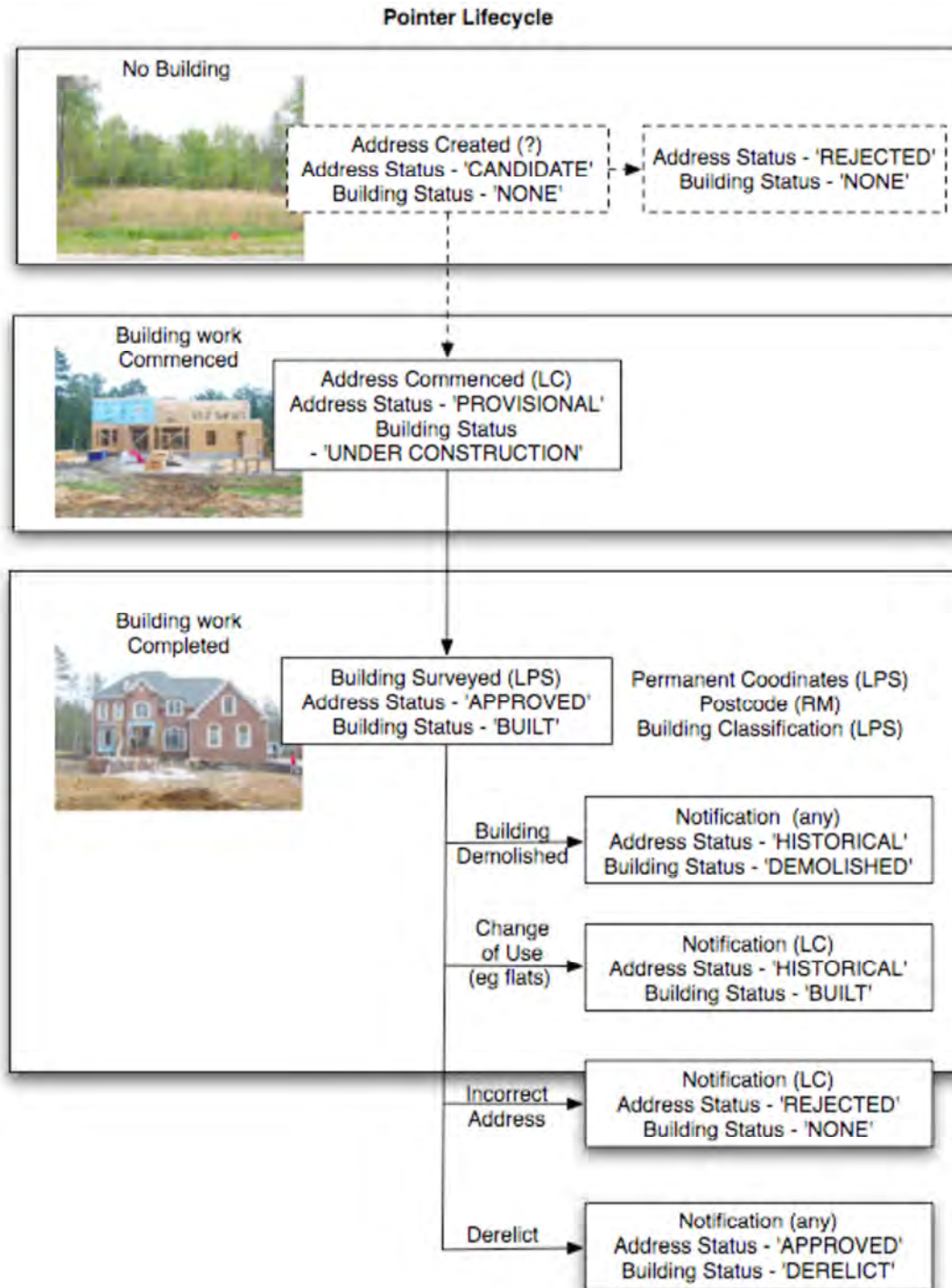
Details

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)



Appendix E – Pointer 2.1 Specification Extract (Page 14)

4.22 ADDRESS_STATUS

Definition

The current logical status of the address.

Constraints

Permitted ADDRESS_STATUS values are: (See diagram above)

- Candidate - before building starts. Planning permission has been granted but building has not commenced. Created by the Local Council before building has begun.
- Provisional – The Local Council has confirmed that the building is under construction.
- Approved – LPS add permanent co-ordinates and/or a building classification. A Postcode may also be added however this does not affect the ADDRESS_STATUS
- Historical - addresses that are no longer in use due to dereliction, demolition etc.
- Rejected – used to indicate the deletion of an incorrect address. Population of this field is mandatory, and is system generated.

Details

The values in this field are system generated and when a new address sent in from a council is entered in the system, the Building_Status is set to 'None' and the Address_Status set to 'Candidate'. When the council sends notification that building has commenced, the Building_Status is set to 'Under Construction' and the Address_Status set to 'Provisional'. After LPS field surveyors have confirmed the exact co-ordinates for the building, the Temp_Coords field is updated and the Building_Status is set to 'Built' and the Address_Status set to 'Approved'. A notification from a council that a building is derelict or demolished results in the Building_Status being updated and the Address_Status set to 'Historical'.

Please note that depending on the purpose for which the data is being used, the data should be filtered on the categories of Address_Status. For example, addresses set to 'Historical' would not be required where a mail shot is planned.

4.23 CLASSIFICATION

Definition

The current use of the building, derived from the LPS classification.

Constraints

Data in this field is system generated.

Permitted CLASSIFICATION values are shown below. These are derived from the detailed LPS list of valuation classifications.

Details

There are three main classification groups :

- NULL – Where the record has not yet been updated with an LPS classification.
- Non Domestic (formerly Commercial) – these records are prefixed with 'ND'
- Domestic (formerly Residential) – these records are prefixed with 'DO'. Where an individual is operating a business from a room within their home, LPS still classify this as a Residential property.

These are subdivided into a further classification as detailed above.

When the building use of an addressable object changes, the CLASSIFICATION field will be updated to reflect this change.

Appendix E – Pointer 2.1 Specification Extract (Page 15)

CODE	CLASSIFICATION DESCRIPTION
ND_agriculture	Agriculture (incl farms, market gardens)
ND_agriculture_other	Miscellaneous Agriculture
ND_comm_other	Commercial other
ND_culture	Cultural (incl museums, libraries)
ND_culture_other	Miscellaneous Culture
ND_education	Education (incl school, further ed)
ND_entertainment	Leisure and tourism(non-sporting - cinemas etc)
ND_ents_other	Miscellaneous Entertainment
ND_freight_other	Freight (canal, dock, railway undertaking)
ND_health	Health(incl hospital, care home, clinics)
ND_hospitality	Hospitality (incl hotels, b&b)
ND_indust_other	Miscellaneous Industry
ND_industry	Industry (incl factory, quarries)
ND_legal	Law and Order
ND_office	Commercial office - banks, post offices, offices
ND_religious	Religious establishment (incl places of worship)
ND_retail	Retail (shops, showrooms etc)
ND_sporting	Recreation (sports facilities)
ND_utilities	Public utilities
ND_utilities_other	Miscellaneous Utilities
DO_apart	Domestic - Apartments/flats
DO_detached	Domestic - detached
DO_semi	Domestic - Semi
DO_terrace	Domestic - Terrace
DO_other	Domestic other (incl Lock-up garages)

4.24 CREATION_DATE

Definition

The date when an address is first entered into the system by the Local Council.

Constraints

This field will only be populated for records created after the Pointer application went live in 2005. The field is automatically populated when records are entered into the database. It does not necessarily relate to the date of building, but rather when the information was provided.

4.25 COMMENCEMENT_DATE

Definition

This is the date when construction on the property has begun.

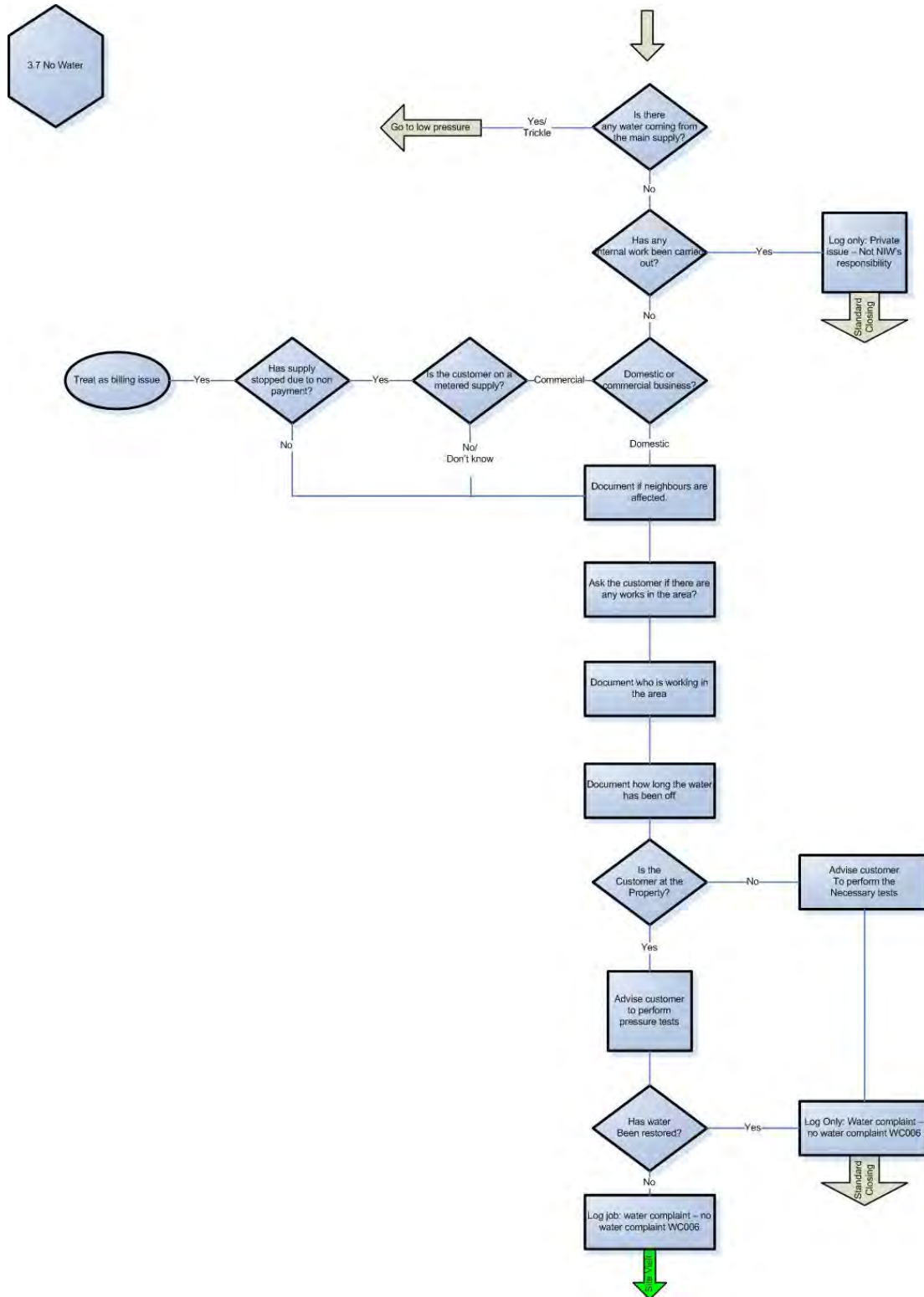
Constraints

This field will be populated for records created after the release of the new Pointer Product and when Local Council informs Pointer of the fact.

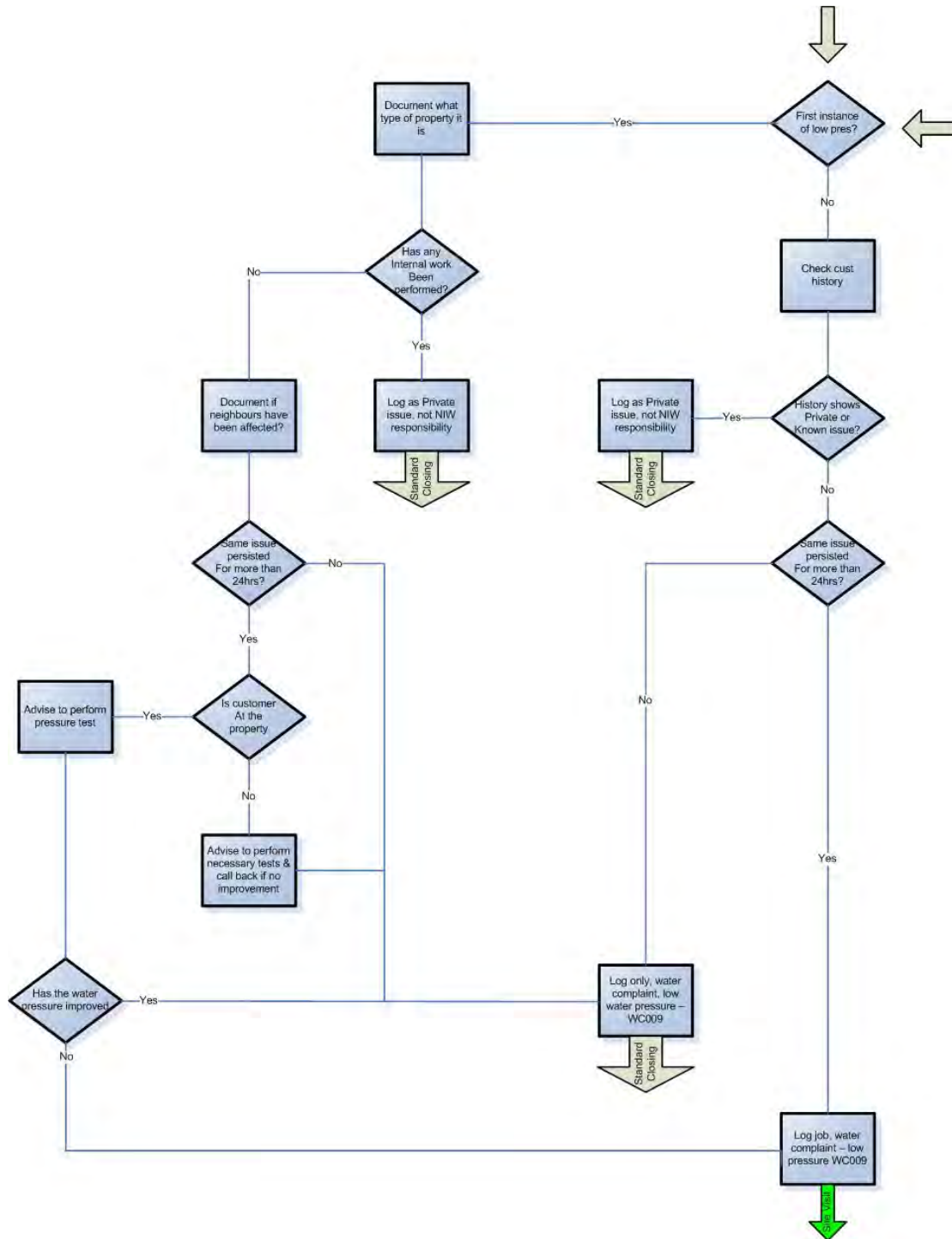
Details

This indicates when the BUILDING_STATUS changes from 'NONE' to 'UNDER CONSTRUCTION'

Appendix F – CRC Call Script for ‘No Water’ Complaints



Appendix F – CRC Call Script for ‘Low Pressure’ Complaints



Appendix G – DG3 Register Extract

Planned Interruptions																																											
Planned and Warned Interruptions																																											
More than 3 hrs																																											
No of Properties																																											
3,610																																											
Interrupt Number	Reported By	Works Request No	Works Order No	Functional Area	Networks Office	Type Of Interruption	Mains Type	Warning Issued			Planned Start		Planned End		Interruption Start		Supplies Restored		All Properties Restored		Duration Of Interruption (Hours)	Total Props Affected	No Of Properties Affected (For Complete Duration Of Interruption)					Duration Of Overrun (Hours)	No Of Properties Affected (During The Overrun Period)					Third Party	Location (S)	Cause Of Interruption	Comments						
								Date	Time	Type Of Warn	Date	Time	Date	Time	Date	Time	Date	Time	Date	Time			> 0 Hrs	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs		> 0 Hrs	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs										
EP012				South East		Planned	Distribution	01/03/2013	11:00	Card Drop	25/03/2013	09:00	25/03/2013	14:00	25/03/2013	09:30	25/03/2013	13:00	25/03/2013	13:00	3.50	1	1	1	0	0	0	0	0	-1.00	0	0	0	0	0	0	0			Mains Rehabilitation			
EP014				South East		Planned	Distribution	13/02/2013	11:00	Card Drop	06/03/2013	09:00	06/03/2013	15:00	06/03/2013	09:30	06/03/2013	13:00	06/03/2013	13:00	3.50	3	3	3	0	0	0	0	0	-2.00	0	0	0	0	0	0	0			Mains Rehabilitation			
EP016				South East		Planned	Distribution	13/02/2013	11:00	Card Drop	08/03/2013	09:00	08/03/2013	13:00	08/03/2013	09:30	08/03/2013	13:00	08/03/2013	13:00	3.50	2	2	2	0	0	0	0	0	0.00	0	0	0	0	0	0	0			Mains Rehabilitation			
EP018				South East		Planned	Distribution	01/03/2013	11:00	Card Drop	19/03/2013	09:00	19/03/2013	14:00	19/03/2013	09:30	19/03/2013	13:00	19/03/2013	13:00	3.50	1	1	1	0	0	0	0	0	-1.00	0	0	0	0	0	0	0			Mains Rehabilitation			
21567				East	DPatrick/Conlig	Planned	Distribution	21/03/2013	12:30	Card Drop	25/03/2013	09:00	25/03/2013	16:00	25/03/2013	12:00	25/03/2013	15:00	25/03/2013	15:30	3.5	24	24	24	0	0	0	0	0	0	0	0	0	0	0	0	0			Install New Fitting (e.g.			
21590				West	B/Mera/B/Money/Moyle	Planned	Distribution	26/03/2013	11:00	Card Drop	28/03/2013	23:00	29/03/2013	06:00	28/03/2013	23:00	29/03/2013	02:15	29/03/2013	02:45	3.75	165	165	165	0	0	0	0	0	0	0	0	0	0	0	0	0	0			New Mains Tie In		
EP010				South East		Planned	Distribution	01/03/2013	11:00	Card Drop	21/03/2013	08:00	21/03/2013	13:00	21/03/2013	09:00	21/03/2013	13:00	21/03/2013	13:00	4.00	1	1	1	0	0	0	0	0	0.00	0	0	0	0	0	0	0			Mains Rehabilitation			
EP063				North		Planned	Distribution	26/02/2013	16:00	Card Drop	12/03/2013	23:00	13/03/2013	06:00	12/03/2013	23:00	13/03/2013	03:00	13/03/2013	03:00	4.00	429	429	429	0	0	0	0	0	-3.00	0	0	0	0	0	0	0			New Mains Tie In			
21528				East	DPatrick/Conlig	Planned	Distribution	26/02/2013	14:00	Card Drop	01/03/2013	09:00	01/03/2013	16:00	01/03/2013	12:00	01/03/2013	15:30	01/03/2013	16:00	4	91	91	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0			New Mains Tie In		
EP031				South East		Planned	Distribution	25/03/2013	09:00	Card Drop	27/03/2013	10:00	27/03/2013	14:00	27/03/2013	10:00	27/03/2013	14:00	27/03/2013	14:00	4.00	2	2	2	0	0	0	0	0	0.00	0	0	0	0	0	0	0			Mains Rehabilitation			
21483				East	DPatrick/Conlig	Planned	Distribution	12/03/2013	09:00	Card Drop	14/03/2013	09:00	14/03/2013	16:00	14/03/2013	10:30	14/03/2013	14:30	14/03/2013	15:00	4.5	60	60	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Install New Fitting (e.g.	
EP020				South East		Planned	Distribution	01/03/2013	11:00	Card Drop	12/03/2013	09:00	12/03/2013	15:00	12/03/2013	09:30	12/03/2013	14:00	12/03/2013	14:00	4.50	2	2	2	0	0	0	0	0	-1.00	0	0	0	0	0	0	0			Mains Rehabilitation			
EP021				South East		Planned	Distribution	13/02/2013	11:00	Card Drop	14/03/2013	09:00	14/03/2013	15:00	14/03/2013	09:00	14/03/2013	14:00	14/03/2013	14:00	5.00	2	2	2	0	0	0	0	0	-1.00	0	0	0	0	0	0	0			Mains Rehabilitation			
EP025				South East		Planned	Distribution	22/03/2013	12:00	Card Drop	25/03/2013	08:00	25/03/2013	18:00	25/03/2013	10:00	25/03/2013	15:00	25/03/2013	15:00	5.00	8	8	8	0	0	0	0	0	-3.00	0	0	0	0	0	0	0			Mains Rehabilitation			
EP022				South East		Planned	Distribution	01/03/2013	11:00	Card Drop	15/03/2013	09:00	15/03/2013	15:00	15/03/2013	09:30	15/03/2013	15:00	15/03/2013	15:00	5.50	1	1	1	0	0	0	0	0	0.00	0	0	0	0	0	0	0			Mains Rehabilitation			
EP039				South East		Planned	Distribution	13/02/2013	11:00	Card Drop	27/03/2013	09:00	27/03/2013	15:00	27/03/2013	09:00	27/03/2013	14:30	27/03/2013	14:30	5.50	10	10	10	0	0	0	0	0	-0.50	0	0	0	0	0	0	0			Mains Rehabilitation			
EP005				South East		Planned	Distribution	04/03/2013	15:00	Card Drop	12/03/2013	08:00	12/03/2013	14:00	12/03/2013	08:30	12/03/2013	14:00	12/03/2013	14:00	5.50	2	2	2	0	0	0	0	0	0.00	0	0	0	0	0	0	0			Mains Rehabilitation			
21580				West	B/Mera/B/Money/Moyle	Planned	Distribution	14/03/2013	13:00	Card Drop	20/03/2013	09:00	20/03/2013	15:00	20/03/2013	09:15	20/03/2013	14:45	20/03/2013	15:00	5.75	140	140	140	0	0	0	0	0	0	0	0	0	0	0	0	0	0			New Mains Tie In		
EP004				South East		Planned	Distribution	07/03/2013	09:00	Card Drop	14/03/2013	10:00	14/03/2013	16:00	14/03/2013	10:00	14/03/2013	15:45	14/03/2013	15:45	5.75	111	111	111	0	0	0	0	0	-0.25	0	0	0	0	0	0	0			Mains Rehabilitation			
21466				East	C/Avon/Barbridge/Armagh	Planned	Distribution	08/03/2013	12:00	Card Drop	12/03/2013	09:00	12/03/2013	16:00	12/03/2013	09:30	12/03/2013	15:00	12/03/2013	15:30	6	14	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Burst Main/Main Repair		
EP011				South East		Planned	Distribution	13/02/2013	11:00	Card Drop	25/03/2013	08:00	25/03/2013	15:00	25/03/2013	08:30	25/03/2013	14:30	25/03/2013	14:30	6.00	1	1	1	0	0	0	0	0	-0.50	0	0	0	0	0	0	0			Mains Rehabilitation			
EP023				South East		Planned	Distribution	11/03/2013	14:00	Card Drop	20/03/2013	21:00	21/03/2013	06:00	20/03/2013	21:00	21/03/2013	02:00	21/03/2013	03:00	6.00	656	656	656	0	0	0	0	0	-3.00	0	0	0	0	0	0	0			Mains Rehabilitation			
EP024				South East		Planned	Distribution	15/03/2013	12:00	Card Drop	19/03/2013	08:00	19/03/2013	18:00	19/03/2013	09:00	19/03/2013	15:00	19/03/2013	15:00	6.00	146	146	146	0	0	0	0	0	-3.00	0	0	0	0	0	0	0			Mains Rehabilitation			
EP013				South East		Planned	Distribution	01/03/2013	11:00	Card Drop	05/03/2013	08:00	05/03/2013	16:00	05/03/2013	08:00	05/03/2013	15:00	05/03/2013	15:00	7.00	3	3	3	0	0	0	0	0	-1.00	0	0	0	0	0	0	0			Mains Rehabilitation			
EP027				South East		Planned	Distribution	25/02/2013	12:00	Card Drop	11/03/2013	23:00	12/03/2013	06:00	11/03/2013	23:00	12/03/2013	06:00	12/03/2013	06:00	7.00	1256	1256	1256	1256	0	0	0	0	0.00	0	0	0	0	0	0	0			Mains Rehabilitation			
EP026				South East		Planned	Distribution	01/03/2013	12:00	Card Drop	04/03/2013	10:00	04/03/2013	18:00	04/03/2013	10:30	04/03/2013	17:00	04/03/2013	17:00	7.00	54	54	54	54	0	0	0	0	-1.00	0	0	0	0	0	0	0			Mains Rehabilitation			
EP015				South East		Planned	Distribution	01/03/2013	11:00	Card Drop	06/03/2013	08:00	06/03/2013	16:00	06/03/2013	08:00	06/03/2013	15:30	06/03/2013	15:30	7.50	3	3	3	3	0	0	0	0	-0.50	0	0	0	0	0	0	0			Mains Rehabilitation			
EP017				South East		Planned	Distribution	01/03/2013	11:00	Card Drop	08/03/2013	08:00	08/03/2013	16:00	08/03/2013	08:00	08/03/2013	15:30	08/03/2013	15:30	7.50	4	4	4	4	0	0	0	0	-0.50	0	0	0	0	0	0	0			Mains Rehabilitation			
EP064				North		Planned	Distribution	05/03/2013	16:00	Card Drop	13/03/2013	08:00	13/03/2013	18:00	13/03/2013	08:00	13/03/2013	16:00	13/03/2013	16:00	8.00	48	48	48	48	0	0	0	0	-2.00	0	0	0	0	0	0	0			New Mains Tie In			
EP029				South East		Planned	Distribution	11/03/2013	11:00	Card Drop	19/03/2013	09:00	19/03/2013	18:00	19/03/2013	09:00	19/03/2013	17:00	19/03/2013	17:00	8.00	10	10	10	10	0	0	0	0	-1.00	0	0	0	0	0	0	0			Mains Rehabilitation			
EP030				South East		Planned	Distribution	11/0																																			

Appendix G – DG3 Register Extract

Planned and Warned Interruptions																																					
More than 6 hrs																																					
No of Properties																																					
1,738																																					
Interrupt Number	Reported By	Works Request No	Works Order No	Functional Area	Networks Office	Type Of Interruption	Mains Type	Warning Issued		Planned Start		Planned End		Interruption Start		Supplies Restored		All Properties Restored		Duration Of Interruption (Hours)	Total Props Affected	No Of Properties Affected (For Complete Duration Of Interruption)					Duration Of Overrun (Hours)	No Of Properties Affected (During The Overrun Period)					Third Party	Location	Cause Of Interruption	Comments	
								Date	Time	Type Of Warn	Date	Time	Date	Time	Date	Time	Date	Time	Date			Time	Date	Time	> 0 Hrs	> 3 Hrs		> 6 Hrs	> 12 Hrs	> 24 Hrs	> 0 Hrs	> 3 Hrs					> 6 Hrs
EP013				South East		Planned	Distribution	01/03/2013	11:00	Card Drop	05/03/2013	08:00	05/03/2013	16:00	05/03/2013	08:00	05/03/2013	15:00	05/03/2013	15:00	7.00	3	3	3	3	0	0	-1.00	0	0	0	0	0			Mains Rehabilitation	
EP027				South East		Planned	Distribution	25/02/2013	12:00	Card Drop	11/03/2013	23:00	12/03/2013	06:00	11/03/2013	23:00	12/03/2013	06:00	12/03/2013	06:00	7.00	1256	1256	1256	1256	0	0	0.00	0	0	0	0	0			Mains Rehabilitation	
EP028				South East		Planned	Distribution	01/03/2013	12:00	Card Drop	04/03/2013	10:00	04/03/2013	18:00	04/03/2013	10:00	04/03/2013	17:00	04/03/2013	17:00	7.00	54	54	54	54	0	0	-1.00	0	0	0	0	0			Mains Rehabilitation	
EP015				South East		Planned	Distribution	01/03/2013	11:00	Card Drop	06/03/2013	06:00	06/03/2013	16:00	06/03/2013	06:00	06/03/2013	15:30	06/03/2013	15:30	7.50	3	3	3	3	0	0	-0.50	0	0	0	0	0			Mains Rehabilitation	
EP017				South East		Planned	Distribution	01/03/2013	11:00	Card Drop	08/03/2013	06:00	08/03/2013	16:00	08/03/2013	06:00	08/03/2013	15:30	08/03/2013	15:30	7.50	4	4	4	4	0	0	-0.50	0	0	0	0	0			Mains Rehabilitation	
EP064				North		Planned	Distribution	05/03/2013	16:00	Card Drop	13/03/2013	08:00	13/03/2013	18:00	13/03/2013	08:00	13/03/2013	16:00	13/03/2013	16:00	8.00	48	48	48	48	0	0	-2.00	0	0	0	0	0			New Mains Te In	
EP029				South East		Planned	Distribution	11/03/2013	11:00	Card Drop	19/03/2013	09:00	19/03/2013	18:00	19/03/2013	09:00	19/03/2013	17:00	19/03/2013	17:00	8.00	10	10	10	10	0	0	-1.00	0	0	0	0	0			Mains Rehabilitation	
EP030				South East		Planned	Distribution	11/03/2013	11:00	Card Drop	15/03/2013	09:00	15/03/2013	18:00	15/03/2013	09:00	15/03/2013	17:00	15/03/2013	17:00	8.00	21	21	21	21	0	0	-1.00	0	0	0	0	0			Mains Rehabilitation	
EP032				South East		Planned	Distribution	28/02/2013	12:00	Card Drop	28/03/2013	08:00	28/03/2013	18:00	28/03/2013	09:00	28/03/2013	17:00	28/03/2013	17:00	8.00	7	7	7	7	0	0	-1.00	0	0	0	0	0			Mains Rehabilitation	
EP033				South East		Planned	Distribution	28/02/2013	12:00	Card Drop	21/03/2013	08:00	21/03/2013	18:00	21/03/2013	09:00	21/03/2013	17:00	21/03/2013	17:00	8.00	4	4	4	4	0	0	-1.00	0	0	0	0	0			Mains Rehabilitation	
EP034				South East		Planned	Distribution	28/02/2013	12:00	Card Drop	20/03/2013	08:00	20/03/2013	18:00	20/03/2013	09:00	20/03/2013	17:00	20/03/2013	17:00	8.00	6	6	6	6	0	0	-1.00	0	0	0	0	0			Mains Rehabilitation	
EP035				South East		Planned	Distribution	28/02/2013	12:00	Card Drop	18/03/2013	08:00	18/03/2013	18:00	18/03/2013	09:00	18/03/2013	17:00	18/03/2013	17:00	8.00	4	4	4	4	0	0	-1.00	0	0	0	0	0			Mains Rehabilitation	
EP036				South East		Planned	Distribution	25/02/2013	12:00	Card Drop	13/03/2013	08:00	13/03/2013	18:00	13/03/2013	09:00	13/03/2013	17:00	13/03/2013	17:00	8.00	10	10	10	10	0	0	-1.00	0	0	0	0	0			Mains Rehabilitation	
EP037				South East		Planned	Distribution	25/02/2013	12:00	Card Drop	05/03/2013	08:00	05/03/2013	18:00	05/03/2013	09:00	05/03/2013	17:00	05/03/2013	17:00	8.00	6	6	6	6	0	0	-1.00	0	0	0	0	0			Mains Rehabilitation	
EP038				South East		Planned	Distribution	25/02/2013	12:00	Card Drop	08/03/2013	08:00	08/03/2013	18:00	08/03/2013	09:00	08/03/2013	17:00	08/03/2013	17:00	8.00	9	9	9	9	0	0	-1.00	0	0	0	0	0			Mains Rehabilitation	
EP043				North		Planned	Distribution	11/02/2013	16:00	Card Drop	07/03/2013	08:00	07/03/2013	20:00	07/03/2013	09:00	07/03/2013	17:00	07/03/2013	17:00	8.00	5	5	5	5	0	0	-3.00	0	0	0	0	0			New Mains Te In	
EP062				North		Planned	Distribution	13/03/2013	16:00	Card Drop	28/03/2013	08:00	28/03/2013	19:00	28/03/2013	08:30	28/03/2013	17:00	28/03/2013	17:00	8.50	12	12	12	12	0	0	-2.00	0	0	0	0	0			New Mains Te In	
EP002				South East		Planned	Distribution	27/02/2013	15:00	Card Drop	04/03/2013	08:00	04/03/2013	18:00	04/03/2013	08:30	04/03/2013	17:30	04/03/2013	17:30	9.00	47	47	47	47	0	0	-0.50	0	0	0	0	0			Mains Rehabilitation	
EP028				South East		Planned	Distribution	11/03/2013	11:00	Card Drop	21/03/2013	09:00	21/03/2013	18:00	21/03/2013	09:00	21/03/2013	18:00	21/03/2013	18:00	9.00	18	18	18	18	0	0	0.00	0	0	0	0	0			Mains Rehabilitation	
EP045				North		Planned	Distribution	01/03/2013	16:00	Card Drop	12/03/2013	08:00	12/03/2013	18:00	12/03/2013	08:00	12/03/2013	17:00	12/03/2013	17:00	9.00	6	6	6	6	0	0	-1.00	0	0	0	0	0			New Mains Te In	
EP046				North		Planned	Distribution	01/03/2013	16:00	Card Drop	12/03/2013	08:00	12/03/2013	18:00	12/03/2013	08:00	12/03/2013	17:00	12/03/2013	17:00	9.00	3	3	3	3	0	0	-1.00	0	0	0	0	0			New Mains Te In	
EP041				North		Planned	Distribution	01/03/2013	16:00	Card Drop	05/03/2013	08:00	05/03/2013	18:00	05/03/2013	08:00	05/03/2013	17:30	05/03/2013	17:30	9.50	7	7	7	7	0	0	-0.50	0	0	0	0	0			New Mains Te In	
EP048				North		Planned	Distribution	01/03/2013	16:00	Card Drop	14/03/2013	08:00	14/03/2013	18:00	14/03/2013	08:00	14/03/2013	17:30	14/03/2013	17:30	9.50	12	12	12	12	0	0	-0.50	0	0	0	0	0			New Mains Te In	
EP049				North		Planned	Distribution	01/03/2013	16:00	Card Drop	15/03/2013	08:00	15/03/2013	18:00	15/03/2013	08:00	15/03/2013	17:30	15/03/2013	17:30	9.50	1	1	1	1	0	0	-0.50	0	0	0	0	0			New Mains Te In	
EP050				North		Planned	Distribution	01/03/2013	16:00	Card Drop	15/03/2013	08:00	15/03/2013	18:00	15/03/2013	08:00	15/03/2013	17:30	15/03/2013	17:30	9.50	11	11	11	11	0	0	-0.50	0	0	0	0	0			New Mains Te In	
EP051				North		Planned	Distribution	01/03/2013	16:00	Card Drop	15/03/2013	08:00	15/03/2013	18:00	15/03/2013	08:00	15/03/2013	17:30	15/03/2013	17:30	9.50	6	6	6	6	0	0	-0.50	0	0	0	0	0			New Mains Te In	
EP055				North		Planned	Distribution	01/03/2013	16:00	Card Drop	20/03/2013	08:00	20/03/2013	18:00	20/03/2013	08:00	20/03/2013	17:30	20/03/2013	17:30	9.50	17	17	17	17	0	0	-0.50	0	0	0	0	0			New Mains Te In	
EP056				North		Planned	Distribution	01/03/2013	16:00	Card Drop	20/03/2013	08:00	20/03/2013	18:00	20/03/2013	08:00	20/03/2013	17:30	20/03/2013	17:30	9.50	23	23	23	23	0	0	-0.50	0	0	0	0	0			New Mains Te In	
EP060				North		Planned	Distribution	01/03/2013	16:00	Card Drop	27/03/2013	08:00	27/03/2013	18:00	27/03/2013	08:00	27/03/2013	17:30	27/03/2013	17:30	9.50	23	23	23	23	0	0	-0.50	0	0	0	0	0			New Mains Te In	
EP061				North		Planned	Distribution	01/03/2013	16:00	Card Drop	28/03/2013	08:00	28/03/2013	18:00	28/03/2013	08:00	28/03/2013	17:30	28/03/2013	17:30	9.50	5	5	5	5	0	0	-0.50	0	0	0	0	0			New Mains Te In	
EP040				North		Planned	Distribution	22/02/2013	16:00	Card Drop	01/03/2013	08:00	01/03/2013	20:00	01/03/2013	08:30	01/03/2013	18:00	01/03/2013	18:00	9.50	17	17	17	17	0	0	-2.00	0	0	0	0	0			New Mains Te In	
EP054				North		Planned	Distribution	01/03/2013	16:00	Card Drop	18/03/2013	08:00	18/03/2013	18:00	18/03/2013	08:30	18/03/2013	18:00	18/03/2013	18:00	9.50	4	4	4	4	0	0	0.00	0	0	0	0	0			New Mains Te In	
EP055				North		Planned	Distribution	01/03/2013	16:00	Card Drop	27/03/2013	08:00	27/03/2013	18:00	27/03/2013	08:30	27/03/2013	18:00	27/03/2013	18:00	9.50	10	10	10	10	0	0										

Northern Ireland Water

Level of Service Methodology

DG5 Flooding

Contents

- 1. Introduction**
- 2. DG5 Flooding Incidents – Internal**
- 3. DG5 Properties at Risk of Flooding – Internal**
- 4. DG5 Cost Benefit Analysis**
- 5. Conclusion**

Appendix A – AIR 13 Table 3 Internal Flooding Key Outputs

Appendix B – Flooding Incident Report (March 2013)

Appendix C – Customer Response Scripts

Appendix D – NI WATER DG5 Internal Flooding Register

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 13:

- 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 Tables 3 AIR13 Return. See Appendix A.

Reporting

NI Water Reports -The following reports are generated by Operations Services for Management information:

- DG5 (Internal) Annual Flooding Summary - Annual
- DG5 (Internal) Properties on the Risk Registers - Annual
- Monthly Reports for NI WATER Executive Team
- Nr of overloaded sewers (Hydraulic Capacity Problems)
- Nr of Overloaded Sewers (Blockage, Collapsed Sewer, Equipment failure)
- Nr of Properties on the 1 in 10 year Flooding Register.

Regulatory Report

The Finance & Regulation Directorate will report to Northern Ireland Authority for the Utility Regulation (NIAUR) on an annual basis.

Situation at March 2013

The DG5 Register has now been developed using evidence gathered from the Sewer Maintenance Contractor, Flooding Incident Reports (FIR), Operational reports, modelling provided by Drainage Area Plan consultant and direct customer contact along with a 100% audit on all orders sent to Meridian for the current Internal flooding records. The Historical data has now been cleansed and the properties allocated to the appropriate category in the Register.

NI Water has now implemented the Reporters recommendation that historic flooding records are defaulted to the 1 in 20 register. However this has meant that only a small number of properties remained in the 2 in 10 and 1 in 10 registers. NI Water has continued work to properly categorise the properties defaulted to the 1 in 20 register and expects the numbers on each register to change significantly as a result. This will enable NI Water to address the risk of flooding at more properties in the 1 in 10 and 2 in 10 registers.

Call center scripting (see appendix C) has been revised in the last 12 months regarding internal flooding reported by the public. The totals have been recorded and there appears to be a considerable reduction in reporting of internal flooding.

New Flood Incident report (March 2013 see appendix B) forms, new Scripts and new script procedures (Jan 12) have helped to achieve this target.

Work has progressed during the year to identify critical and lateral sewers these layers have been recently added to NI Water's Corporate Asset Register and as result of this work NI Water are in a better position for AIR13 to report on whether collapses or blockages have occurred in a private lateral, public lateral or public main sewers.

All internal flooding incidents are subjected to a robust investigation. 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. Those incidents of internal flooding that do not meet the DG5 Criteria are recorded in the 'excluded' section of the Database.

The register is no longer held as an MS Excel spreadsheet but has been transferred to an Oracle database represented on the Corporate Asset Register as GIS layer. AIR13 reporting for internal flooding is produced by querying the Internal Flooding Oracle Database.

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 2012 to March 2013 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 AIR13, 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 13 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

The DG5 Registers have now been developed using, evidence gathered from Sewer Maintenance Contractor, Flooding Incident Reports (FIR), Operational reports, modelling provided by Drainage Area Plan consultant and direct customer contact.

During this reporting year NI Water has made strenuous efforts to improve the quality of information provided. As per the Reporters Recommendation NIW have made enquiries as to whom they should contact within NIHE if required. NIW call centre staff have been more rigorous in not accepting NIHE customer complaints. The figures show for themselves, of the 660 reported incidents of internal flooding only 3 related to a NIHE property, 0.198%. Due to this very low % NIW have not made any formal contact with NIHE but will continue to monitor this situation on a monthly basis.

The FIR has been further amended as per the Reporters Recommendation, (see appendix B), to ensure that the quality of information provided by the contractor is of a much more detailed quality and that there is a photograph scanned onto the FIR. At present NIW are still awaiting the Contractor's full implementation of a new handheld PDA which will require all fields to be completed before the operator can close any job. The PDA's are still being trialled as the contractor has met with difficulties during the trial. As per the MUL Contracts Manager this device should be fully operational by the end of May 2013. 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 enables both sides to be fully aware of what is happening. In any case where there is ambiguity the Customer Field Manager attends to resolve the issue.

New Flood Incident Report forms (Mar 2013) – See Appendix B.

Previously the FIR stated 'Comments on cause of flooding :(Select only one category below)' and the contractor thought they didn't need to tick any of the boxes if there was no flooding. The FIR now states 'Comments on cause of reported incident' and the contractor has been advised that this needs completed. Appendix B shows an example of a completed new FIR.

As all the internal historical data has been investigated and entered in the appropriate categories of the register it will be rare that there will be any figures entered in Line 15a.

3. DG5 Properties at Risk of Flooding – Internal

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 no longer be held as an MS Excel spread sheet but has now been transferred to an Oracle database represented on the Corporate Asset Register as GIS layer on CARtomap.

Annual Information Returns for properties on the DG5 registers are now obtained by interrogating the NI Water DG5 Oracle Database. Changes (additions and removals) are cross-checked against the meeting records of the DG5 panel where evidence is scrutinised and decisions on changes to the register made.

Continuing investigation of Flooding incidents on the 1 in 20 register

NI Water has continued work to properly categorise the properties defaulted to the 1 in 20 register and expects the numbers on each register to change significantly as a result. This will enable NI Water to address the risk of flooding at more properties in the 1 in 10 and 2 in 10 registers.

Mitigation

Properties protected from the risk of Flooding by mitigating measures, such non-return valves are added to the 1 in 20 Register unless evidence exists to allow their addition to either the 1in 10 or 2 in 10 registers.

Movements between the 'at risk' registers

NI Water has started work to properly categorise the properties defaulted to the 1 in 20 register and based on the results so far it is expected that this exercise will result in significant movement between the registers and also in the removal of some properties from the 1 in 20 register through better information. A small number of properties have moved between the registers as a result of better information and repeat flooding incidents.

Cost benefit Analysis

The company does not at present carry out cost benefit analysis on DG5 projects. However to allow prioritisation of schemes the programme set out below is proposed.

- Review of existing CWP to ensure proposed DG5 related programmes of work are captured.
- Development of a prioritisation methodology relative to frequency, impact and cost.
- Receipt and analysis of feasibility studies to inform the prioritisation matrix, including cost details.
- Review to ensure alignment with Price Control Targets and Capital Allocations.

Assumptions

'Historical' properties found to have been removed from the risk of flooding through company action in years previous to PC10 are now classed as removed through better information even if the company action was capital expenditure.

Properties suffering internal flooding during a greater than 1 in 20 year rainfall event are reported as severe weather incidents.

Removals from the registers

92 properties in total were removed from the registers. 66 properties were removed by company action over this reporting period. 26 properties were removed through better information.

Properties which have not flooded in the last 10 years

32 properties remain on the register which have not flooded in the last 10 years. These incidents will be re-investigated to confirm that they have been correctly categorised and should still be on the register.

Predicted/Actual additions to the register

The final business plan submission predicted that;

“NI Water assumes that 12 new properties experiencing internal flooding will occur each year...”

In this reporting period 69 properties which have suffered internal flooding, during the year or in previous years due to hydraulic incapacity, or were re-categorised due to better information or repeat flooding, were added to the register.

Reporter’s Recommendation on Rainfall Radar Data

The reporter in his AIR11 report recommended that;

‘Whilst we are unsure of the availability or costs associated with the acquisition of raw radar data for NI to assess severe weather events, we would recommend the Company explore the feasibility of this approach as a future initiative’.

NI Water consulted widely with other Water Utilities, the Met Office and the Centre for Ecology & Hydrology on the availability and functionality of Radar data and software for the Northern Ireland area.

NI Water has approved a business case for acquisition of raw Radar Rainfall data and associated software to enable more accurate assessment of severe weather events. Tender documents were prepared but due to internal governance issues NI Water will only now be going to the market to procure the radar service and software in an open competition to ensure best value for money. When procured NI Water will incorporate the use of Radar Rainfall data into the DG5 verification process.

Company Practice in Dealing with Claims

NI Water is conscious that out of sewer flooding is distressing and particularly so when internal flooding has occurred. Out of sewer flooding may arise as a result of a transient blockage caused by inappropriate materials having been discarded into the sewer, severe weather conditions, or perhaps a defect in the sewer or at a pumping station.

Often NI Water does not have any legal liability for the distress and damage experienced by customers following such an event. As a publicly funded body, and also relying on its public liability insurance cover Northern Ireland Water has to ensure that claims are only met from public funds when there is a legal liability to do so. It will therefore encourage those affected customers who have household insurance to initially make any claim directly against their household policy.

Whilst any legal liability has to be investigated before a claim is met NI Water will entirely without prejudice endeavour to arrange a basic external clean-up of domestic properties when such an event has been reported. Furthermore it will endeavour to ensure that whilst investigation is on-going any vulnerable customers whose property has been rendered uninhabitable by internal flooding, and who also do not have the benefit of household insurance, are housed in temporary accommodation.

Conclusion

NI Water have made further significant changes on reporting for AIR13, this has been achieved by better processes and better Data Quality, along with new tracking and reporting measures. The Wastewater Business Unit now has experienced staff in post this year to ensure improved data quality for Internal Flood Reporting. The DG5 panel of experts continues to impose a high level of governance and scrutiny of the whole DG5 process.

NI Water will continue to strive to improve the robustness of data on, and investigation of, internal flooding incidents. The review of historical incidents in the 1 in 20 register is continuing allowing the proper categorisation of incidents and in turn will allow effort to be directed at priority properties which have genuine 1 in 10 or 2 in 10 DG5 flooding problems.

NI Water are planning further improvements in both the internal flooding investigative process and the DG5 database to increase the accuracy and robustness of data and to reduce the amount of hard copy records produced.

Appendix A – AIR 12 Table 3 Internal Flooding**ANNUAL INFORMATION RETURN - TABLE 3 KEY OUTPUTS
SEWERAGE SERVICE - INTERNAL FLOODING (TOTAL)**

DESCRIPTION		UNITS
A DG5 ANNUAL FLOODING SUMMARY		
1	Number of domestic properties connected to sewerage system	000
(i) OVERLOADED SEWERS		
2	Properties flooded in the year (overloaded sewers)	nr
3	Flooding incidents in the year (overloaded sewers)	nr
4	Flooding incidents (overloaded sewers attributed to severe weather)	nr
4a	Properties flooded in the year attributed to severe weather	nr
5	Props. where flooding limited to uninhabited cellars only (o/loaded sewers)	nr
(ii) OTHER CAUSES		
6	Properties flooded in the year (other causes)	nr
7	Properties which have flooded more than once in the last ten years (other causes)	nr
8	Flooding incidents (other causes - equipment failures)	nr
9	Flooding incidents (other causes - blockages)	nr
10	Flooding incidents (other causes - collapses)	nr
11	Props. where flooding limited to uninhabited cellars only (other causes)	nr
B DG5 PROPERTIES ON THE AT RISK REGISTER		
(i) SUMMARY		
12	2 in 10 register at end of year	nr
13	1 in 10 register at end of year	nr
14	Total 1 in 10 and 2 in 10 properties on the register at end of year	nr
15	1 in 20 register at end of year	nr
15A	Potential risk of property flooding identified requiring further investigation to assess at risk category.	nr
16	Props. on the register which have not flooded in the past 10 yrs (excl. severe weather)	nr
17	Properties which have not flooded internally but suffer restricted toilet use (RTU)	nr
(iii) ANNUAL CHANGES TO 2 IN 10 & 1 IN 10 REGISTERS		
22	Removed by company action	nr
23	Removed because of better information	nr
24	Added because of better information (actually flooded)	nr
25	Added because of better information (modelled)	nr
26	Average capex cost of permanent solutions to 1 in 10 & 2 in 10 DG5 problems	£000/prop
(v) ANNUAL CHANGES TO THE 1 IN 20 REGISTER		
30	Removed by company action (1 in 20)	nr
31	Removed because of better information (1 in 20)	nr
32	Added because of better information (actually flooded - 1 in 20)	nr
33	Added because of better information (modelled - 1 in 20)	nr
34	Average capex cost of permanent solutions to 1 in 20 DG5 problems	£000/prop

Appendix B.**APPENDIX A – Incident Report Form Contractor
Northern Ireland Water – Flooding Incident Report**Work Order Ref No: 03162775 Name: Down DrainsLocation: [REDACTED]Date: 23/03/2013 Arrival time: 14:001) 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:

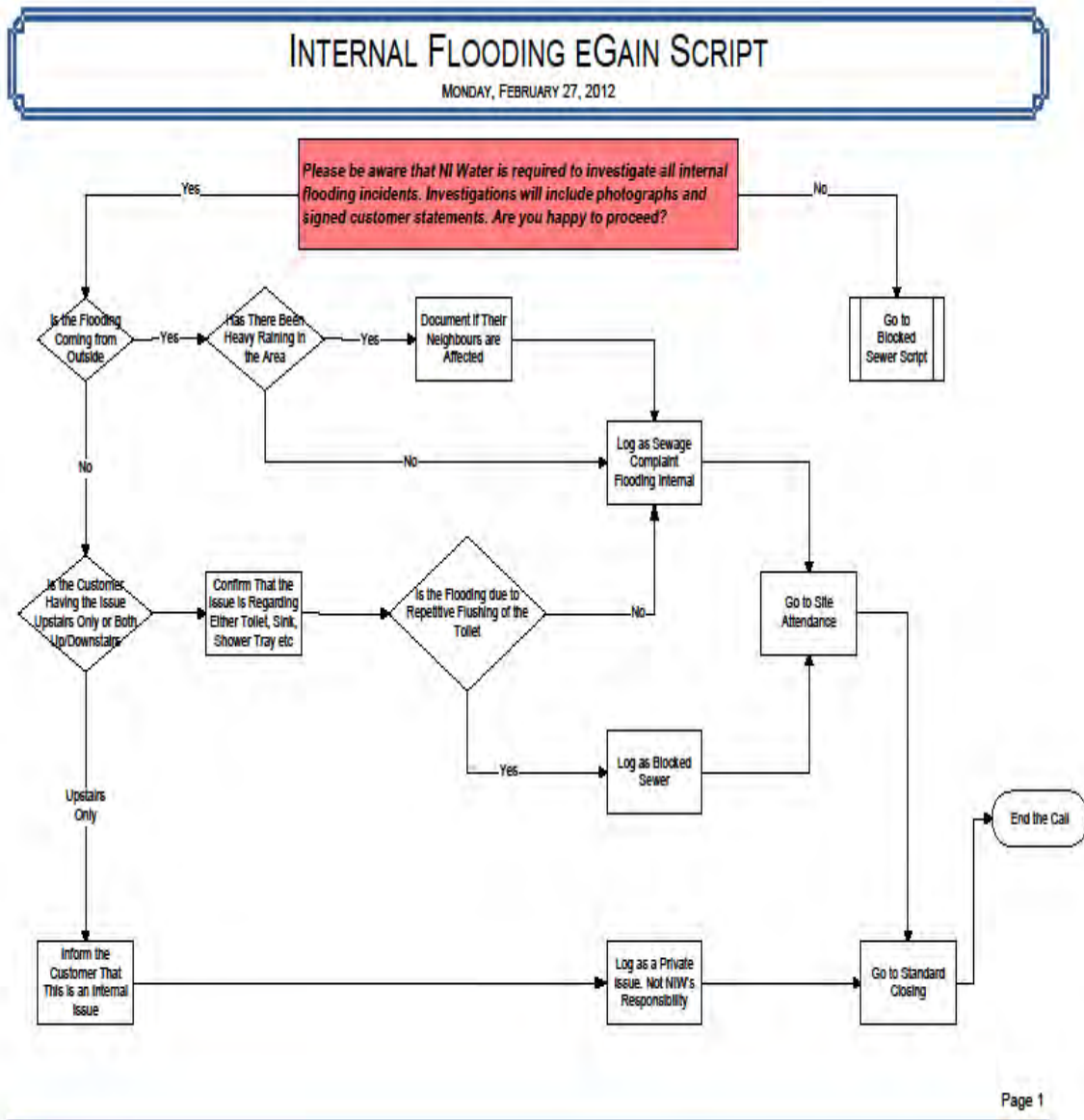
Yes No Not Aware

6) Weather Conditions:

Dry OR Wet Heavy Medium Light **Comments: Especially for Flooded jobs or Follow on jobs****PHOTO FOR FLOODED JOBS:**



APPENDIX C – New Flooding Internal Script



Appendix D NI Water DG5 Internal Flooding Register - Methodology



DG5 Internal Flooding Register - Methodology

Final v1.0

31st March 2012

Main Contributors	Aspect/Section	Notes
████████████████████	Draft	
████████████████████	Final	

Bid/Project Code: 41514657		Document No: 0.6	Controlled Copy No: (in COLOUR – not black)		
Revision No	Date	Description/Amendment	Checked	Reviewed	6 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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1 Introduction

1.1 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.

1.2 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.

2 Definitions

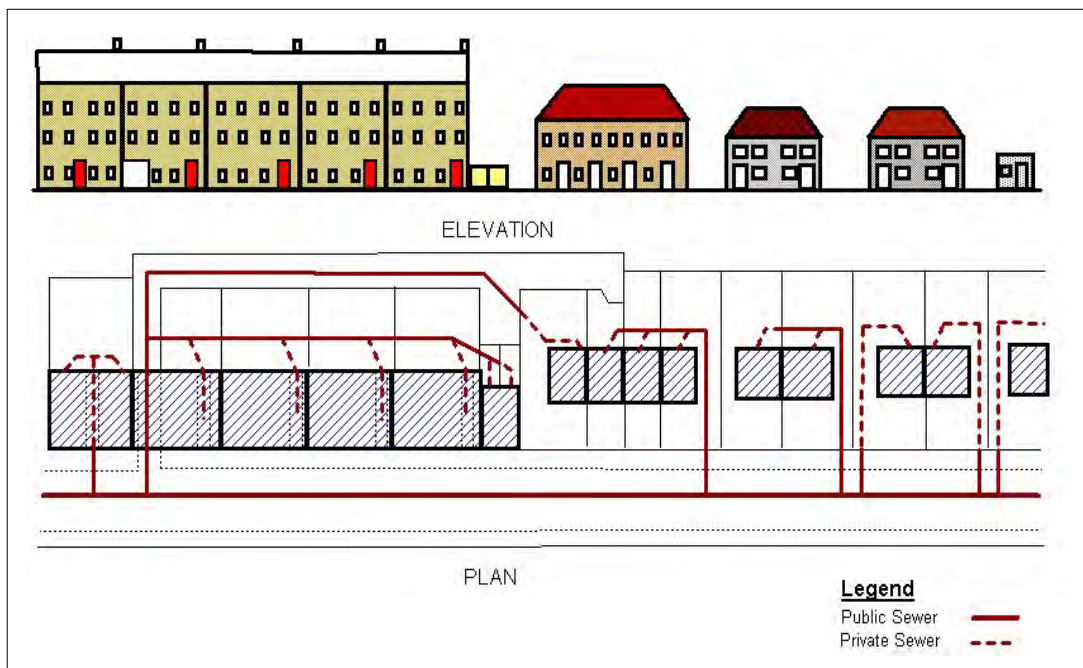
The following definitions are to be applied when recording and reporting properties and incidents held on NI Water's DG5 Internal Flooding Register.

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.

2.1 Legal Definitions

2.1.1 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.

2.1.2 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.

2.1.3 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.

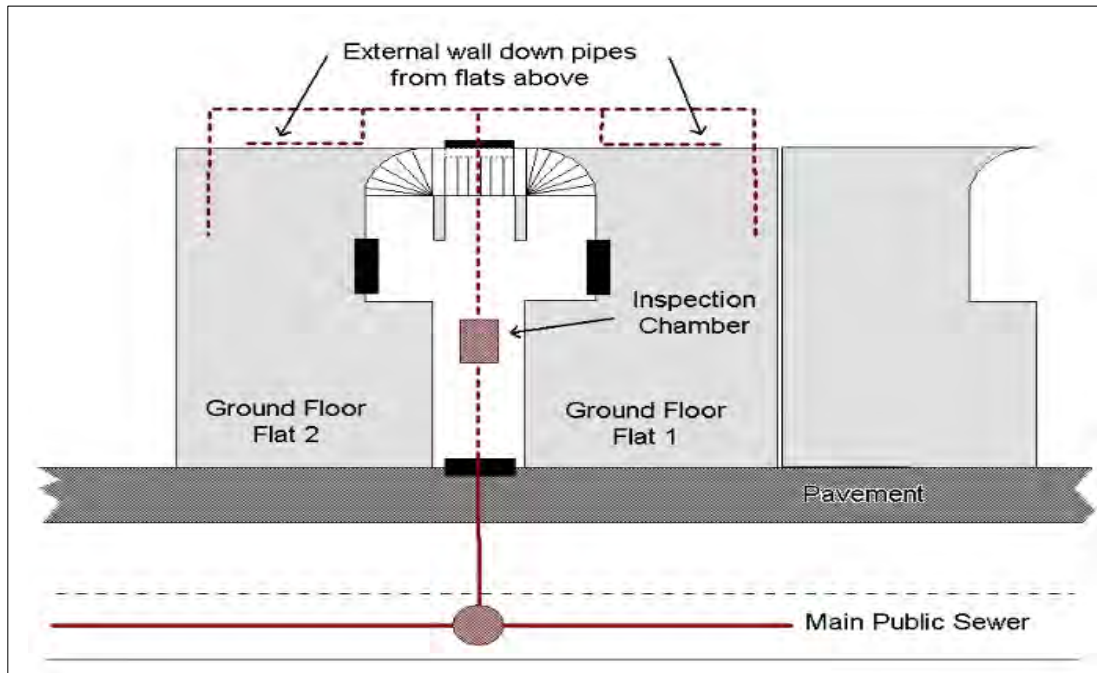
2.1.4 Basement Flooding

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.

2.1.5 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.



2.1.6 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.

2.1.7 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.

2.1.8 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.

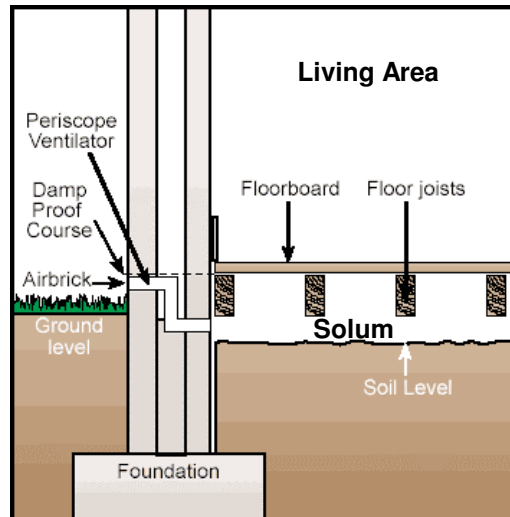
A permanent solution is defined as one that permanently addresses the cause of the hydraulic overload. Permanent works would enable a property to be removed from the DG5 Internal Flooding Register.

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'

2.2 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.

2.2.1 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.

2.3 Flooding Cause Definition

2.3.1 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.

2.3.2 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

2.3.3 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.

2.3.4 Blockages

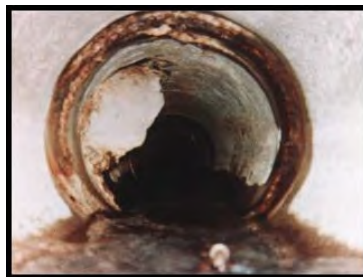
A sewer blockage can be attributed to a number of factors, including siltation, fat, roots, and debris, as shown below.



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.

2.3.5 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.



2.3.6 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.

2.3.7 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.

2.3.8 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.

2.4 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.

3 Internal Flooding Register – Governance

3.1 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.

3.2 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.

4 Internal Flooding Register – Business Process

4.1 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.

4.2 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.

4.3 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.

4.4 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.

4.5 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.

4.6 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.

4.7 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

4.8 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.

5 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.

5.1 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).

5.1.1 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.

5.1.2 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.

5.1.3 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.

5.1.4 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.

5.1.5 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.

5.1.6 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.

5.1.7 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.

5.1.8 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.

5.1.9 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.

5.1.10 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.

5.1.11 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;

$$428 / 24 = 17.83 \text{ (rounded up to 18 units)}$$

5.1.12 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.

5.1.13 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'.

5.1.14 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.

5.2 Format of Internal Flooding Register

5.2.1 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

5.2.2 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.

6 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 1 in 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.

7 Internal Flooding Register – Solutions

7.1 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.

7.2 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.

7.3 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.

8 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.

9 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.

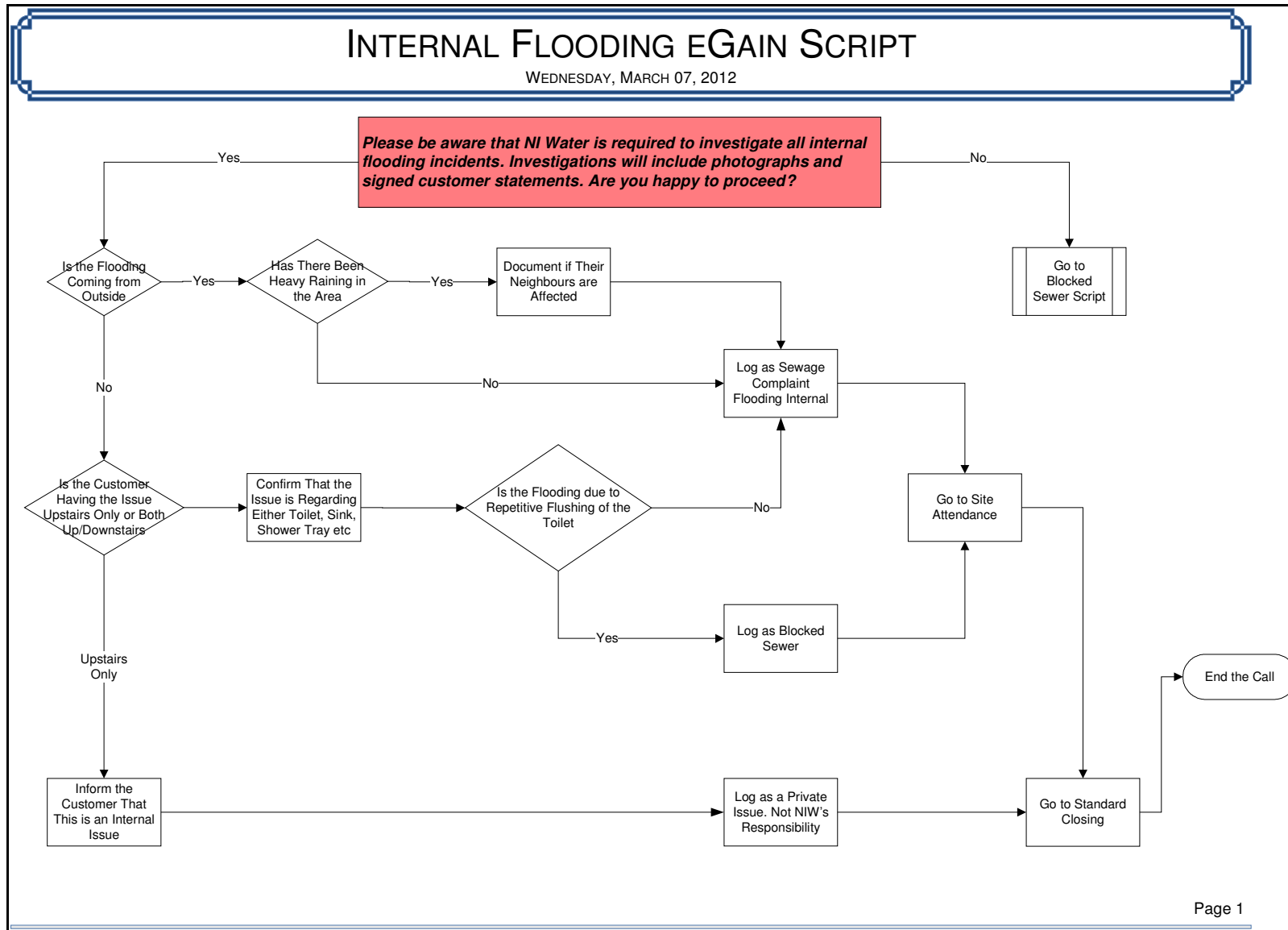
▪ Yours faithfully,
▪
▪
▪
▪
▪ [REDACTED]
▪ Asset Performance

**– 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

**– Call Centre DG5 Caller
Script**



Appendix E - Extract from DG5 Register

INCIDENT_DATE	PROPERTY_NO	STREET_NAME	TOWN_CITY	COUNTY	POST_CODE	STATUS	CATEGORY	INCIDENT_REASON	REGISTER_TYPE	MITIGATION	REASON_ADDED	DATE_ADDED	REASON_REMOVED	DATE_REMOVED	COST_BENEFIT
20/02/2008			Ahoghill	Antrim		Live	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	N/A		N/A
21/09/2007			Antrim	Antrim		Live	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	N/A		N/A
11/10/2008			Antrim	Antrim		Removed	Internal Flooding	Overloaded Sewer	1 in 20	Yes	Historical	01/04/2008	Company Action	09/09/2011	N/A
11/10/2008			Antrim	Antrim		Removed	Internal Flooding	Overloaded Sewer	1 in 20	Yes	Historical	01/04/2008	Company Action	09/09/2011	N/A
09/10/2007	219		Antrim	Antrim		Live	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	N/A		N/A
24/10/2009			Antrim	Antrim		Excluded	Internal Flooding	Equipment Failure	Flooding Other Causes	No	Better Info	24/10/2009	N/A		N/A
11/09/2008			Antrim	Antrim		Excluded	Internal Flooding	Equipment Failure	Flooding Other Causes	No	Better Info	11/09/2008	N/A		N/A
06/01/2008			Antrim	Antrim		Live	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	N/A		N/A
23/10/2011			Antrim	Antrim		Excluded	Internal Flooding	Severe Weather	Flooding Other Causes	No	Better Info	27/01/2012	N/A		N/A
26/08/2011			Ardglass	Down		Excluded	Internal Flooding	Blockage	Flooding Other Causes	No	Better Info	12/10/2011	N/A		N/A
17/04/2004			Armagh	Armagh		Live	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	N/A		N/A
22/04/2012			Armagh	Armagh		Excluded	Internal Flooding	Blockage	Flooding Other Causes	No	Better Info	06/07/2012	N/A		N/A
11/02/2011			Ballinamallard	Fermanagh		Excluded	Internal Flooding	Equipment Failure	Flooding Other Causes	No	Better Info	03/04/2010	N/A		N/A
14/11/2010			Ballinamallard	Fermanagh		Excluded	Internal Flooding	Equipment Failure	Flooding Other Causes	No	Better Info	14/11/2010	N/A		N/A
14/05/2010			Ballycastle	Antrim		Excluded	Internal Flooding	Blockage	Flooding Other Causes	No	Better Info	14/05/2010	N/A		N/A
10/07/2008			Ballyclare	Antrim		Excluded	Internal Flooding	Collapse	Flooding Other Causes	No	Better Info	10/07/2008	N/A		N/A
11/09/2008			Ballygowan	Down		Excluded	Internal Flooding	Equipment Failure	Flooding Other Causes	No	Better Info	11/09/2008	N/A		N/A
08/03/2008			Ballymena	Antrim		Removed	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	Better Info	31/03/2013	N/A
26/11/2010			Ballymena	Antrim		Removed	Internal Flooding	Blockage	1 in 20	No	Historical	01/04/2008	Better Info	31/03/2013	N/A
12/06/2007			Ballymena	Antrim		Excluded	Internal Flooding	Severe weather	Flooding Other Causes	No	Historical	12/06/2007	N/A		N/A
17/04/2012			Ballynahinch	Down		Excluded	Internal Flooding	Blockage	Flooding Other Causes	No	Better Info	06/07/2012	N/A		N/A
27/06/2012			Ballyskeagh	Down		Excluded	Internal Flooding	Severe Weather	Flooding Other Causes	No	Better Info	22/11/2012	N/A		N/A
07/08/2011			Banbridge	Armagh		Excluded	Internal Flooding	Blockage	Flooding Other Causes	No	Better Info	12/10/2011	N/A		N/A
08/12/2000			Bangor	Down		Live	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	N/A		N/A
09/09/2009			Bangor	Down		Excluded	Internal Flooding	Blockage	Flooding Other Causes	No	Better Info	09/09/2009	N/A		N/A
30/01/2012			Bangor	Down		Excluded	Internal Flooding	Blockage	Flooding Other Causes	No	Better Info	27/02/2012	N/A		N/A
02/11/2010			Bangor	Down		Excluded	Internal Flooding	Severe Weather	Flooding Other Causes	No	Better Info	02/11/2010	N/A		N/A
18/12/2000			Bangor	Down		Live	Internal Flooding	Overloaded Sewer	1 in 10	No	Better Info	09/09/2011	N/A		N/A
27/06/2012			Belast	Down		Excluded	Internal Flooding	Severe Weather	Flooding Other Causes	No	Better Info	22/11/2012	N/A		N/A
28/07/2000			Belfast	Antrim		Removed	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	Better Info	22/11/2012	N/A
28/07/2000			Belfast	Antrim		Live	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	N/A		N/A
28/07/2000			Belfast	Antrim		Live	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	N/A		N/A
28/07/2000			Belfast	Antrim		Live	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	N/A		N/A
28/07/2000			BELFAST			Live	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	N/A		N/A
28/07/2000			BELFAST			Live	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	N/A		N/A
02/08/2000			Belfast	Down		Live	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	N/A		N/A
02/08/2000			BELFAST			Live	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	N/A		N/A
02/08/2000			BELFAST			Live	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	N/A		N/A
02/08/2000			BELFAST			Live	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	N/A		N/A
27/06/2012			Belfast	Antrim		Live	Internal Flooding	Severe Weather	1 in 20	No	Historical	01/04/2008	N/A		N/A
09/10/2000			Belfast	Antrim		Live	Internal Flooding	Overloaded Sewer	1 in 20	No	Historical	01/04/2008	N/A		N/A

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 customers 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.

However, there will be cases where the contact has still not been resolved by the time the AIR reporting information is extracted. Where the associated Holding Letter

has been issued in the following year, then this closure will be reported in the subsequent year's AIR Return.

Where a Holding Letter has been issued in the same year as the outstanding DG6 contact, if it hasn't been closed by the date of the year end extraction, then this will not be reported in either this year or the following year's AIR return. We have recently embarked upon a DG6 improvement project which will help to reduce the time taken to resolve long outstanding DG6 contacts, thereby reducing the frequency of this occurrence in future reporting years. Also as a result of this project our end of year DG6 % is greater than 100%

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.

Changes in system during the report year

NIW introduced Savvion, a Business Process Management (BPM) solution, in Q3. This is primarily used for case-management and workflow purposes at present within NIW Account Services to aid progress tracking of written DG6 contacts, DG7 contacts and non-regulated correspondence etc. Savvion is not used for contacts which are resolved at point of contact. It is not used to output reporting for AIR

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 CorVu 'DG6 Closed QRY (Live)' is used 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.

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 being 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 2012/13

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 2013. All incoming written correspondence is passed to Account Services. It is then sifted and categorised as operational correspondence, payment notification, DG6 or DG7 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 exclusions detailed in section 3.1, 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 is included in that year's information (although it may continue into the following year).

However, there will be cases where the complaint has still not been resolved by the time the AIR reporting information is extracted. Where the associated substantive holding response has been issued in the following year, the closure will be reported in the subsequent year's AIR Return.

Where a substantive holding response has been issued in the same year as the outstanding DG7 complaint and it hasn't been closed by the end date of the year end extraction, it will not be reported in either the current or the following year's AIR Return.

Auditing

This process falls under the remit of NIW Internal Audit. There is currently a Contact Management Audit being carried out which includes complaint handling.

In addition, each response undergoes a series of quality assurance checks before issue.

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. A log of agreed exceptions is held by NIW Contract Office.

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

NIW introduced Savvion, a Business Process Management (BPM) solution, in Q3 of 12/13. This is primarily used for case-management and workflow purposes at present within NIW Account Services to aid progress tracking of written DG6 contacts, DG7 contacts and non-regulated correspondence etc. Savvion is not used for contacts which are resolved at point of contact. It is not used to output reporting for AIR.

Actual Data

Management reports are produced from the RapidXtra system, including a daily hit list which identifies by section any item of correspondence outstanding.

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 CorVu 'DG7 Closed QRY (Live)' is used 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 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 correspondence is closed on the 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 is 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 been in place throughout the reporting period to support reporting on the number holding responses issued throughout 12/13. This was collated using a manually-recorded, off-system process.

The figure reported in Line 14 of Table 5a is the total recorded number of holding responses issued to customers during 12/13 owing to pending investigations linked to open DG7 contacts. 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 also includes holding responses issued within 12/13 to DG7 contacts received in the previous reporting year.

Based on the recorded data, we can say that one (or more) holding response was sent in relation to 543 DG7 contacts which were received in 12/13. This equates to 17% of the received total volume. Therefore, it can be concluded that one or more holding response was issued in relation to 17% of the DG7 contacts received during 12/13.

Exploration into on-system reporting using Savvion will be undertaken during 13/14.

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 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.

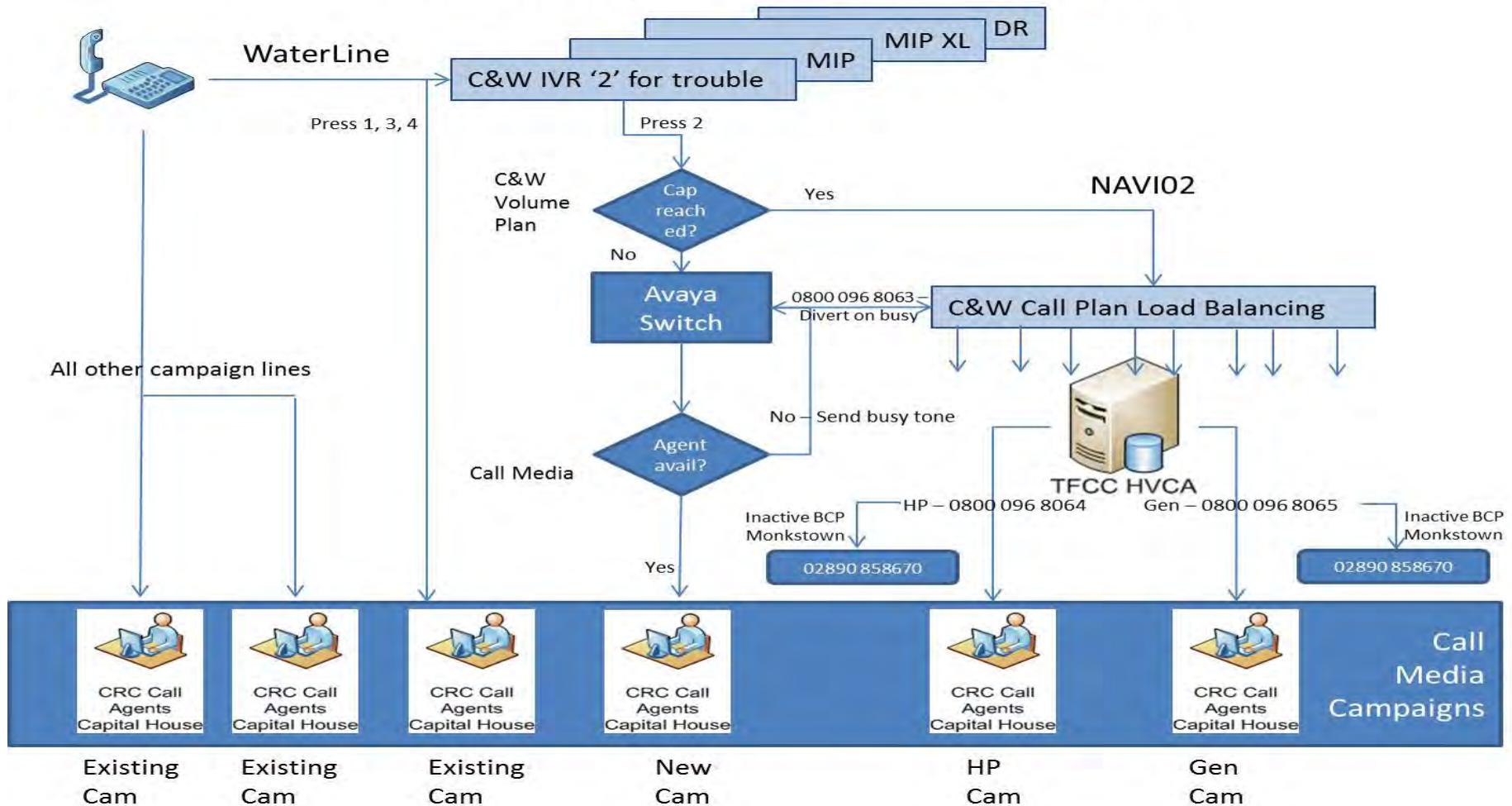
Rejected Calls

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 2013

Section 4

Customer Research Appendix

Annual Information Return 2013

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 100 interviews, Q2 100 interviews, Q3 100 interviews and Q4 100 interviews.

All surveys were administered using a Computer Aided Telephone Interviewing (CATI) unit. Each survey was undertaken by multiple interviewers to prevent any possibility of interviewer bias.

Sampling

Sample Provision

NIW is 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:

- Contact Name (customer or business name);
- Business or Domestic (to indicate if a business or domestic customer);
- Telephone Number;
- Date of contact (date call made to NIW);
- Customer reference number (to trace any responses back through the system if necessary); and
- Operational and Billing flag (to indicate the nature of call).

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 12/13
5377	4600	4858	4594	19429

Sample Management

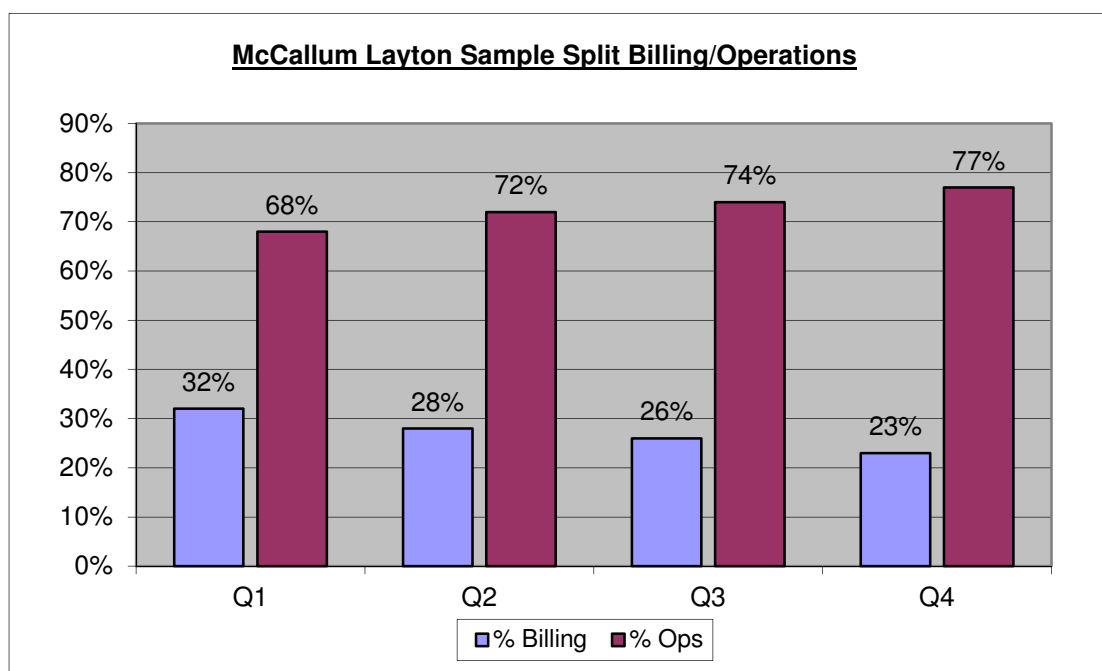
Upon receipt of the sample, McCallum Layton applied the following sample management procedures for each water company:-

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.

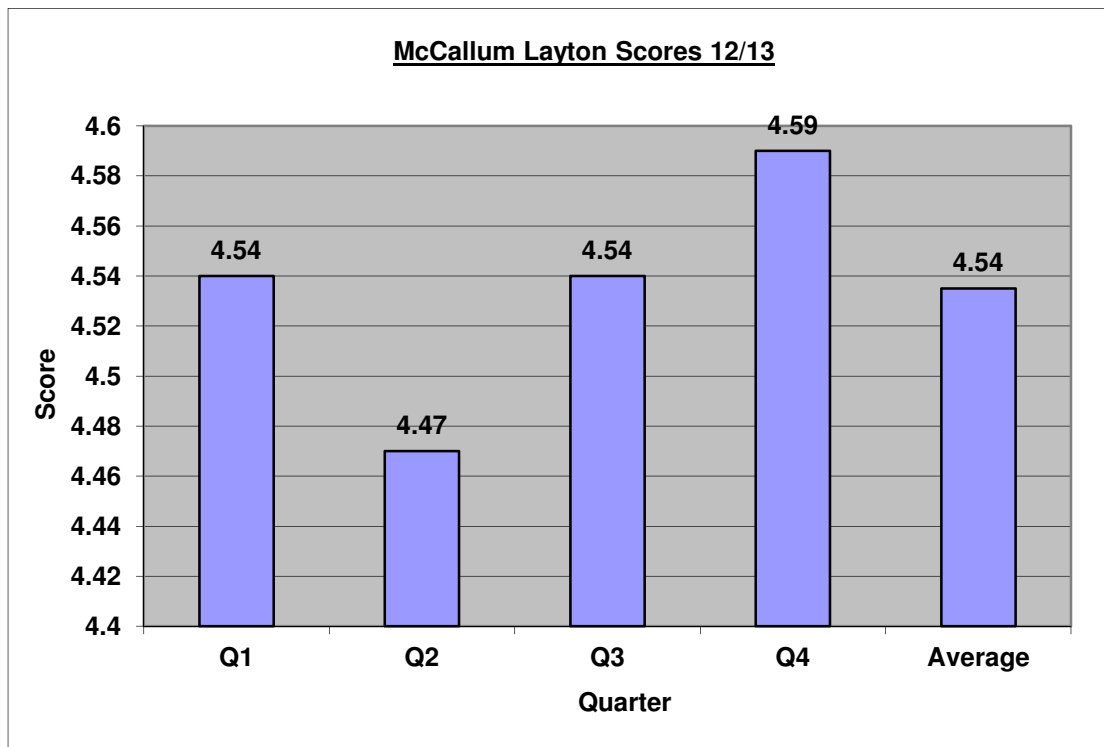
Given that NIW is not billing domestic customers (unlike other UK water companies), it is important to establish the proportion of calls received by day and query type to ascertain the quotas needed to ensure a representational spread of interviews was achieved.

The following table shows the NIW percentage split for billing and operations, per quarter.



Overall Performance Assessment

NIW achieved an overall score of 4.57/5.0 for the reporting year, falling short of the target set at the beginning of the year of 4.7, as follows;



In 2012/2013 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 last 3 years, as follows;

