

Public Domain Version Annual Information Return 2011



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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
A SERVICE AND PERFORMANCE						
1 DG2 Percentage of properties receiving low water pressure	%	2	1.29	0.72	0.27	0.25
2 DG3 Overall performance score	nr	2	1.43	1.41	2.21	95.79
3 DG4 % population - hosepipe restrictions	%	1	0.0	0.0	0.0	0.0
4 DG4 % population - drought orders	%	1	0.0	0.0	0.0	0.0
5 DG6 Percentage dealt with within 5 working days	%	1	95.0	98.6	98.1	98.9
6 DG7 Percentage dealt with within 10 working days	%	1	90.5	97.6	99.4	100.0
7 DG8 Bills for metered customers – performance	%	1	71.8	93.3	92.3	96.1
8 DG9 Percentage of calls not abandoned	%	1	1.0	1.1	2.6	88.2
9 DG9 Percentage of calls not receiving the engaged tone	%	1	0.0	0.0	0.0	32.8
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.
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
13 OPI(TIM)	nr	2	98.98	99.22	98.90	99.08
14 Completion of nominated water treatment works schemes to improve water quality	nr	0	0	3	2	2
D SERVICEABILITY						
20 Mains bursts per 1,000 km	nr	0	139	141	147	137
21 Water treatment work coliform non-compliance	%	2	0.12	0.08	0.08	0.01
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	NIW is currently defining serviceability indicators with NIAUR, and until these are agreed lines 22 and 23 cannot be usefully completed.
23 Water non-infrastructure	text		N/C	N/C		
E DEFINED OUTPUTS FOR MAINTAINING BASE SERVICES						
24 Water infrastructure (1)			Description 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.			
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		
A SERVICE PERFORMANCE								
Sewer flooding- internal								
1 2 in 10 register at end of year	nr	0	80	80	1	6		
2 1 in 10 register at end of year	nr	0	0	745	704	3		
3 1 in 20 register at end of year	nr	0	0	0	0	211		
3a Potential risk of property flooding identified requiring further investigation to assess the risk category.	nr	0			6	8		
4 Properties flooded in the year (overloaded sewers)	nr	0	195	3	6	4		
5 Properties flooded in the year (other causes)	nr	0	366	23	5	28		
Sewer flooding- external								
6 Areas flooded externally in the year (overloaded sewers)	nr	0	899	1,792	1,196	0		
7 Areas flooded externally in the year (other causes)	nr	0	4,283	7,968	6,872	1,314		
B QUALITY & ENVIRONMENTAL COMPLIANCE - Total								
8 % of WWTWs compliant (Water (NI) Order numeric consents)	%	1	87.0	90.4	91.9	88.7		
9 % of WWTWs compliant (UWWTD consents)	%	1	89.6	92.0	92.9	93.6		
10 % of total p.e. served by WWTWs compliant with Water (NI) Order consent (LUT)	%	2	N/C	N/C	93.80	95.57		
11 % of total p.e. served by WWTWs compliant with UWWTD consent (LUT)	%	2	92.40	89.38	97.58	96.58		
11a % of total p.e. served by WWTWs complying with Water (NI) Order numeric consents	%	2				87.95		
11b % of total p.e. served by WWTWs complying with UWWTD consent	%	2				96.58		
12 % of intermittent discharges satisfactory	%	2	67.97	93.89	74.01	73.67		
13 Percentage unsatisfactory sludge disposal	%	2	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		
16 Delivery of improvements to WWTW through nominated schemes as part of a defined programme of work	nr	0	16	44	63	20		
18 Total sewage sludge produced (inc. PPP)	tds	1	38.4	38.0	37.9	38.1		
D SERVICEABILITY TO CUSTOMERS								
20 Sewer collapses per 1,000 km	nr	1	47.3	96.3	68.7	84.9		
21 Number of high and medium pollution incidents attributable to NI Water	nr	0	67	56	55	46		
22 % of WWTWs discharges compliant with numeric consents	%	1	86.7	90.0	92.1	88.3		
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.		
24 Sewerage non- infrastructure	text		N/C	N/C				
E DEFINED OUTPUTS FOR MAINTAINING BASE SERVICES								
25 Sewerage infrastructure (1)	<table border="1"> <thead> <tr> <th>Description</th> </tr> </thead> <tbody> <tr> <td>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.</td> </tr> </tbody> </table>						Description	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.
Description								
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.								
26 Sewerage infrastructure (2)								
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

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DESCRIPTION		UNITS	DP	REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10	REPORTING YEAR 2010-11
A TOTAL EXPENDITURE							
1	Total operating expenditure - water service (NI Water only)	£m	3	95.358	98.499	71.762	87.148
1a	Total operating expenditure (PPP) - water service	£m	3	N/C	N/C	10.944	1.795
2	Total capital expenditure (excl. adopted and nil cost assets)	£m	3	80.389	206.859	101.554	73.876
3	Total operating expenditure - sewerage service (NI Water only)	£m	3	88.395	109.092	97.808	71.569
3a	Total operating expenditure (PPP) - sewerage service	£m	3	2.872	N/C	17.975	23.371
4	Total capital expenditure (excluding adopted and nil cost assets)	£m	3	173.896	186.296	156.420	88.267
B CURRENT COST ACCOUNTS - PROFIT & LOSS							
5	Total Turnover	£m	3	294.057	327.395	347.569	345.740
6	Current cost operating costs (including CCD & IRC)	£m	3	-278.250	-315.427	-328.924	-341.824
7	Current cost operating profit	£m	3	17.077	11.626	22.963	8.893
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
9	Total net debt	£m	3	250.717	435.006	617.211	725.832
10a	Post tax return on capital	%	2	1.88	1.06	1.72	0.58
10b	Pre tax return on capital	%	2	N/C	1.06	1.72	0.58
D KEY FINANCIAL INDICATORS							
11	Cash interest cover (funds from operations; gross interest)	ratio	2	12.26	5.75	3.97	3.07
12	Adjusted cash interest cover (funds from operation less capital charges; gross interest)	ratio	2	2.17	0.77	0.49	-0.28
13	Adjusted cash interest cover (funds from operation less capital maintenance; gross interest)	ratio	2	5.12	1.62	1.86	1.77
14	Funds from operations: debt	ratio	2	0.43	0.24	0.18	0.13
15	Retained cash flow: debt	ratio	2	0.54	0.18	0.11	0.1
16	Gearing: D/RCV	%	2	25.45	36.41	43.42	45.87

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

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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
A OPERATING EXPENDITURE/PROPERTY ANALYSIS							
1	Base service - operating expenditure/property served	£/prop	2	128.35	130.39	96.65	116.76
2	Enhanced service - additional operating expenditure/property served	£/prop	2	0.00	0.00	0.00	0.02
3	Improving and maintaining supply demand balance – additional operating expenditure/property served	£/prop	2	0.00	0.00	0.00	0.02
4	Quality enhancements - additional operating expenditure/property served	£/prop	2	0.00	0.07	0.42	0.02
5	New outputs/obligations – additional operating expenditure/property served	£/prop	2	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
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
8	Enhanced service - additional capital expenditure/property served	£/prop	2	7.99	43.86	18.19	5.89
9	Improving and maintaining supply/demand balance - additional capital expenditure/property served	£/prop	2	21.04	83.46	33.77	28.89
10	Quality enhancements - additional capital expenditure/property served	£/prop	2	21.16	65.22	26.65	14.44
11	New outputs/obligations – additional capital expenditure/property served	£/prop	2	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
C CAPITAL WORKS ACTIVITY							
17	Length of new, renewed or relined mains	km	2				295.66
D WATER BALANCE							
18	Distribution input (inc. PPP)	MI/d	2	614.45	632.71	623.24	625.15
19	Total leakage	MI/d	2	156.52	180.93	186.86	176.97
20	Total water savings achieved/assumed	MI/d	2	0.00	0.02	0.04	0.27
21	Water delivered	MI/d	2	498.10	496.50	477.89	489.83
22	Security of supply index (planned levels of service)	nr	0	-26	42	88	97
23	Security of supply index (reference levels of service)	nr	0	-26	42	88	97
E METERING							
24a	Number of non household meters renewed	nr	0			779	5814
25	Meter optants installed	nr	0	0	0	0	0
25a	Meter optants installed- non household	nr	0			26	40
26	Selective meters - installed	nr	0	0	0	3945	4427
26a	Selective meters - installed- non household	nr	0			907	1071
27	Percentage of households metered	%	1	4.6	0.0	0.0	0.0
27a	Percentage of non households metered	%	1			81.1	83.4
F OTHER KEY SUPPORTING INFORMATION							
29	Customers on the special assistance register	nr	0	N/C	N/C	546	1112
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

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
A OPERATING EXPENDITURE / PROPERTY ANALYSIS							
1	Base service - operating expenditure/property served	£/prop	2	139.71	172.33	157.28	117.33
2	Enhanced service - additional operating expenditure/property served	£/prop	2	0.00	0.07	0.56	0
3	Supply/demand balance - additional operating expenditure/property served	£/prop	2	0.95	0.78	1.60	0.16
4	Quality enhancements - additional operating expenditure/property served	£/prop	2	0.15	1.65	2.34	0.21
5	New outputs/obligations - additional operating expenditure	£/prop	2	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
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
8	Enhanced service - additional capital expenditure/property served	£/prop	2	79.16	45.21	33.08	14.51
9	Supply/demand balance - additional capital expenditure/property served	£/prop	2	70.14	67.80	48.70	31.34
10	Quality enhancements - additional capital expenditure/property served	£/prop	2	78.73	127.27	104.00	48.94
11	New outputs/obligations - additional capital expenditure	£/prop	2	0.00	0.00	0.36	0.00
12	Sewerage service - Total capital expenditure/property served	£/prop	2	275.01	295.47	254.94	139.94
C CAPITAL WORKS ACTIVITY							
13	Sewers renovated	km	2	2.96	3.90	2.19	15.66
14	Sewers replaced	km	2	12.52	8.24	11.26	11.08
15	Total sewers renovated and replaced	km	2	15.48	12.14	13.45	26.74
D SEWER FLOODING ACTIVITY							
18	Internal property flooding solved by company action	nr	0	N/C	N/C	185	0
19	External only flooding problems solved by company action	nr	0	N/C	N/C	N/C	N/C
20	External linked problems solved by company action	nr	0	N/C	N/C	N/C	N/C
21	Reduction in internal flooding due to other causes	nr	0	N/C	N/C	18	-23
E OTHER KEY SUPPORTING INFORMATION							
24	Volume waste water returned	MI/d	2	382.57	347.82	337.63	308.01
25	Average connected properties - sewerage (excluding void properties)	000	0	628	624	605	608



Annual Information Return 2011

Section 1

Board's Overview

Board's Statement

In support of Northern Ireland Water's 2011 Annual Information Return (AIR10), its Board of Directors is required by the Utility Regulator to prepare a statement on the compilation of AIR11, explaining how it has satisfied itself as to the accuracy and completeness of the information provided.

The Directors consider that AIR11 provides a true and fair view of the state of affairs of NI Water for the financial year 2010/11. In preparing AIR11, 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 AIR11 is as reliable, accurate and complete as is reasonably practicable.

Processes and Internal Systems of Control

AIR11 has been compiled in accordance with NI Water's AIR Completion Manual, which was approved for use in compiling AIR11 and subsequent Annual Information Returns. The manual addresses recommendations from previous AIR audits made by NI Water's Internal Audit function and by the independent technical Reporter.

In 2009 NI Water's Internal Audit function carried out an audit of the 2008 Annual Information Return (AIR08) completion and submission process. The findings of the audit were presented in their report "Annual Information Return (AIR) Submission Process" (1 April 2009). The report's detailed findings included a recommendation that documentation be put in place to define the roles, responsibilities and procedures for completing and submitting the AIR.

In June/July 2009 the Reporter conducted an audit of AIR09. This audit included a review of the systems, procedures and internal controls utilised in compiling and approving the AIR submission. The Reporter made a number of recommendations similar to those of Internal Audit, including the need for clear ownership of AIR data, evidence of peer review and procedural documentation covering the processes followed in compiling the AIR submission.

All of the recommendations made by NI Water's Internal Audit and the independent Reporter have been addressed in the AIR Completion Manual. It details roles, responsibilities and governance procedures, and provides guidance and templates for the completion of AIR methodologies, data tables and company commentaries.

AIR11 Project Governance

The AIR11 Project Board was chaired by the Regulation Manager and comprised representatives (senior managers) from eight functional areas, i.e. those functions which contribute data to the AIR11 submission. A representative from Internal Audit attended Project Board meetings ex officio.

The primary roles of the AIR Project Board included:

1. disseminating information to and from functional Working Groups;
2. coordinating any cross-functional operation of Working Groups;
3. ensuring the AIR submission programme was adhered to;
4. other roles/responsibilities, included:
 - a. the ongoing development of line methodologies and oversight of line methodology quality;
 - b. monitoring implementation of Reporter's recommendations.

Each member of the AIR Project Board chaired a functional Working Group. 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 AIR11 Project Board. Authors, reviewers and approvers of Line Methodologies, Data Tables and Company Commentaries were designated for all input data in the AIR11 submission.

To ensure reporting consistency for AIR11, every item of data provided in the AIR11 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 AIR11 Reporting Requirements on 31 March 2011. Audits were undertaken by the company's Auditor and the Reporter in May and June 2011. Feedback from the Reporter and Auditor was used to redraft the tables and commentaries when appropriate.

Challenge, in respect of data assurance, was provided by consideration at departmental functional working groups, the Executive Committee and Board Meetings.

The complete AIR11 submission was endorsed by the Executive Committee and Board in June and July 2011 respectively.

Board Involvement

In summary, the involvement of NI Water's Board in the completion of AIR11 included:

- Reviewing monthly company business performance analysis;
- Receiving a presentation from the Reporter and the Auditor in June and July;
- Reviewing, commenting upon and approving the AIR11 Board's Overview, while having access to the full return;
- 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 AIR11.

The following activities were undertaken which enhanced NI Water's ability to meet the Reporting Requirements of AIR11:

- Development of systems and controls to populate AIR11 and other regulatory reporting requirements. This includes the ongoing development of methodologies to report against regulatory measures.
- Projects associated with the Business Improvement programme, such as the Management Information, Information Communications Technology (ICT) and Asset Management projects.
- The data quality improvement project.

The above developments are subjected to monitoring and review by the Executive Committee, Board Sub-Committees and the Board as part of the NI Water governance framework.

The following measures help to ensure that AIR11 complies with the Utility Regulator's Reporting Requirements and provides some assurance in respect of material assumptions and judgements included in the AIR11 commentaries:

- Clear accountability at senior management level for the ownership of all elements of AIR11. 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 AIR11 process have been disseminated through the AIR11 Project Board to all staff involved in the data collection process.
- Every datum in AIR11 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 financial datum is prepared and reviewed by separate individuals and reconciled to the chart of accounts.
- Every financial datum 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 datum is submitted for AIR11 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 access to 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 for the Annual Information Return.
- The Reporter makes a presentation to the Board near the conclusion of the AIR11 process. Both the Reporter and the Auditor present to the Audit Committee/Board near the conclusion of the AIR11 process.
- Directors directly challenge the production and content of AIR11 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 and 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 AIR11.

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

Acting Chief Executive, Northern Ireland Water



Kevin Steele

Non-Executive Director, Northern Ireland Water

Chapter 1

Key Outputs and Service Delivery

Tables A and B

Water Quality

The 2010¹ compliance levels for drinking water at the customer tap are at an all time high with a Mean Zonal Compliance (MZC) outturn of 99.81%. This represents the best ever drinking water quality for Northern Ireland and follows a continuous improvement trend over the last four years. The compliance level exceeds the requirement of the DRD Social and Environmental Guidance and NI Water's internal target of 99.70%. Our programme of investment to maintain and upgrade water treatment works continues to produce compliance improvement in drinking water quality. The Mains Rehabilitation Programme is scheduled to give priority to areas of greatest need and will contribute towards improving the quality of drinking water delivered to the customer's tap over the next fifteen years

Wastewater

As well as providing high quality, reliable and safe drinking water to its customers, NI Water also removes wastewater from homes and businesses all over Northern Ireland. After appropriate treatment the effluent is returned safely to the environment. We achieved the target for the calendar year 2010 of 85.0% of works complying with wastewater treatment standards and the target of 94.80% of the population served by compliant wastewater treatment works. The organisation also outperformed the 2010 target for high and medium severity pollution incidents (not more than 54 per annum).

EC Bathing Waters

During 2010 the NIEA monitored 24 identified bathing waters (under the European Bathing Water Directive) throughout the bathing season. The Directive contains two standards on the quality of bathing water: a mandatory standard; and a more stringent guideline standard. In 2010, 22 of the 24 identified bathing waters in Northern Ireland met the mandatory standard, and 16 met the higher guideline standards.

It should be noted that the quality of bathing water can be impacted by many factors outside the control of NI Water – for example, urban run-off, agricultural run-off and river inputs. The weather can have a significant impact on bathing water quality, with high rainfall leading to increased run-off and operation of Combined Sewer Overflows (CSOs).

Customer Billing and Contact

Quarterly independent market research, first introduced in 2007/08, continues to be carried out on the Company's behalf, through telephone surveys of 100 customers who have called the Company for any reason.

The surveys were completed in quarters 2 to 4 of the reporting year, achieving an overall average score of 4.59 out of 5.

¹ This target is measured on a calendar year basis

As the other water utilities in England and Wales now use a different approach (SIM), and Scottish Water does not publish their customer satisfaction results, we are unable to provide a ranking for 2010/11.

These independent quarterly surveys will continue during the 2011/12 year. We will also be investigating the introduction of a Customer Satisfaction and Tracking (CSAT) solution that will allow surveys to be run on a more regular basis. This solution uses voice recognition and recording technology to capture feedback directly from customers without the agent's knowledge.

During 2010/11, a total of 1,040,555 calls were made to the advertised NI Water telephone numbers, of which 300,722 were answered. The above figures reflect the impact of the freeze/thaw. On the 28 December 2010, NI Water took substantially more call attempts in one day than it did in the whole of 2009/10.

The exceptional level of call volumes during this incident had an adverse impact on service levels and we missed our 2010/11 targets on 'calls not abandoned', 88.19% against a target of 99.00%, and 'calls not engaged', 32.77% against a target of 99.90%.

Our performance, excluding the freeze/thaw, would have been 97.14% against the 'calls not abandoned' target and 100% against 'calls not engaged' target.

The winter weather has had a significant impact on NI Water's pledge to reduce the percentage of properties affected by unplanned interruptions to the water supply exceeding 6 hours. December was the coldest calendar month for over 100 years and saw unprecedented numbers of 'no water' complaints taken by the company's Customer Relations Centre and numbers of properties affected by unplanned interruptions. At the height of the operational difficulties on 29 December, approximately 117,000 properties were without supplies, around 95,000 as a result of supply constraints, 18,000 as a result of service reservoir drain-down and 3,000 as a result of burst mains and other causes. Many properties experienced more than one distinct interruption when supply rotation was introduced to allow service reservoir levels to recover.

The impact of the 2009/10 freeze/thaw was greatest in the rural northwest parts of the Province. In 2010/11, the impact was more widespread and numbers of affected properties were particularly high in urban areas such as Belfast.

Throughout the year a number of other incidents, including water supply interruptions in the Kilkeel area in early February 2011, were dealt with and our incident plan procedures were activated in response to these incidents.

We have embraced the recommendations made by the Utility Regulator to improve our response in future and are currently working to have them implemented.

We witnessed an increase in the number of written complaints received during 2010/11 due to the freeze/thaw, following which volumes in February and March 2011 remained higher than before the incident. Despite the increased volumes, we exceeded the 98.5% target with a performance of 99.98%. However, the 'Response to billing contacts' (DG6) performance of 98.87% missed the target of 99.90%, due to the reallocation of resources to assist within the contact centre during the freeze/thaw.

During 2010/11, NI Water worked with CCNI to address 24 recommendations arising out of the 'Tapping into Customer Views'² research on water quality, flooding, environmental and customer services. An update on this report was planned during 2010/11 but was postponed, by CCNI, due to the water crisis. In February 2011, CCNI published its 'Left High and Dry' report, containing six high level recommendations. The scope of Tapping into Consumer Views may be extended to include improvements following the freeze/thaw in 2010/11.

Following the previous year's pilot, CCNI carried out a second annual complaints review in March 2011. This review assessed a sample of complaints received during the year and during the freeze/thaw. The draft report has been submitted to NI Water and is being reviewed.

Non-Domestic Charges

Full measured sewerage charges were introduced from 1 April 2009. However, as a result of the decision of the Northern Ireland Executive to defer domestic charges, a new domestic allowance of 190m³ for eligible sewerage customers was also introduced in 2009/10. Unmeasured water and sewerage charges continued to be billed at 50% of the full charge. The charges are published in the company's Scheme of Charges available by writing to NI Water, PO Box 2026, Belfast, BT1 9DF or on www.niwater.com/watercharges.

We also mailed a Summary Charges 2010/11 leaflet to all non-domestic customers in July 2010.

Account Management

During 2010/11, our focus continued to be on the large consumers via the key account management process. However, other customer groups were identified:

- Agricultural sector - we are working towards a more case-managed approach, as well as seeking to work in partnership with support groups for the farming sector, including the Ulster Farmers Union; and
- Retail and commercial customers - we are looking at improvements to billing for our large multi-site retail customers, helping them to monitor consumption.

We aim to continue this tailored approach across the full customer profile, based on our customers' behaviour and engagement.

² http://www.consumercouncil.org.uk/filestore/documents/Web_report.pdf

Accurate measured bills are central to customer account management and we had a series of performance targets for meter reading and measured billing in 2010/11:

- 95% of bills to be based on actual meter reads; and
- 95% of bills to be issued within 5 working days of a meter reading (including and excluding any that require investigation).

Although the Freeze/thaw event impacted on our ability to locate or read meters due to the severe weather conditions and diversion of staff to support the incident response team, we still managed to achieve our target for bills based on actual meter reads, with a performance of 96.11%. This is a tremendous achievement given the weather conditions and other demands on meter reading staff, exceeding the target of 95%.

Unfortunately, for measured bills issued within 5 working days of a meter reading (including and excluding any that require investigation), our performance of 90.94% and 92.33% respectively fell below our target of 95% in 2010/11.

In 2011/12 we will be targeting a performance of 98% (excluding any that require investigation and 95% (including any that require investigations) for measured bills issued within 5 working days of a meter reading.

Metering programme

We continued our programme of installing meters on all new properties with first time connections to the water supply system, in accordance with existing legislation, and on existing unmeasured non-domestic properties where possible. We will continue the metering of new build properties and first time connections in 2012/13, as well as continuing the programme of meter installations on unmeasured non-domestic properties. All meters installed on domestic premises do not currently generate a charge or bills.

Codes of Practice

We launched our Priority Services service in February 2009. At the end of March 2010, 546 customers were on the Special Assistance Register. We have created a dedicated project to achieve the following key objectives:

- Increase the number of individual customers on the Customer Care Register to 2000 by the end of December 2011;³
- Develop a list of key organisations that look after or house vulnerable customers, such as hospitals and nursing homes;
- Develop call plans for both groups during an incident;
- Develop the NI Water website to ensure it is consistent and accessible;
- Participate in the Vulnerable People Task Group setup by the Civil Contingencies Group NI.

During 2010/11, we worked with the Consumer Council to agree the review of Codes of Practice on water supply services, sewerage services, dealing with

³ We currently have circa 1400 on the register (as at June 2011)

leaks, complaints as well as further development of our Customer Care Register. This included special assistance and critical care.

We will continue to work with the Consumer Council throughout 2011/12, in our shared endeavours to enhance the customer experience. This will include consultation on tasks linked to our customer transformation projects and the annual complaints assessment. As part of our customer-facing improvement programme, we will be working closely with CCNI on the format of our bills with a view to making them easier for our customers to understand.

Health and Safety

We continue to focus on making NI Water a safe place to work by working with line managers to reduce accidents in the workplace. In particular, we are targeting the improvement of safety behaviours by all staff through our 'work safer' campaign. One of our key performance indicators in this area is to reduce the number of RIDDOR⁴ accidents, i.e. those with more than 3 days absence associated and which must be reported to the Health and Safety Executive for Northern Ireland.

Going forward, we will focus on Health and Safety regulation, leadership and behaviour led initiatives and build on our good Health and Safety performance in 2010/11, when our Health and Safety KPI target of not more than 10 RIDDOR accidents was surpassed. During 2010/11 we also achieved an in-year record of 196 days without a RIDDOR incident. The Health and Safety KPI target for 2011/12 has been set at not more than 9 RIDDOR accidents which, if achieved, will deliver a sustainable 53% improvement on the 2006/07 benchmark out-turn of 19 RIDDOR accidents.

All senior managers are now well aware of risk areas for special attention and have communicated the practicable control measures to manage these within their own functions to ensure that our 2011/12 Health and Safety KPI target is met.

⁴ Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (Northern Ireland) 1997

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 £403.2m for the year to 31 March 2011 (2010: £377.4m). Included in revenue was £283.1m (2010: £277.1m) received from DRD (Subsidy £263.2m; Road Drainage Charges £19.9m) - the remainder being measured and unmeasured charges, transfers of assets from customers, connection / infrastructure charges and other third party contributions. The subsidy covered the full domestic charge and the Northern Ireland Executive has decided that this arrangement will remain in place during 2011/12. The final decision on domestic charging for 2012/13 and beyond has not yet been taken by the Northern Ireland Executive.

Results from operating activities before interest for the year was £168.4m. Operating costs in 2010/11 of £234.8m (2010: £239.3m) were impacted by a number of factors including impairment loss on assets and higher Public Private Partnership costs as additional sites went live. These were offset by lower material and contractor costs as a result of the continued focus to drive through efficiencies. The tax charge for the year was £31.7m. The effective tax rate for the year to 31 March 2011 was 28.3% (2010 39.1%). The Board will consider a proposal to declare a dividend of £26m in July 2011.

Total assets increased by 7.3% to £2,087.8m 086.2m (2010: £1,944.9m0m). The main movements in the financial position items were increases in property, plant & equipment of £154.7m relating to our commitment to investment in the Capital Works Programme offset by increases in net debt. Our net debt figure was £959.2m at 31 March 2011 (2010: £858.8m). Gearing increased from 44.6% to 47.2% reflecting the draw down of loans under the Unsecured Loan notes 2027 Instrument.

Cash flows and debt

Operating activities generated a net cash inflow of £173.3m (2010: £148.0m). Net cash outflows of £181.4m (2010: £247.7m) related to investing activities. This includes acquisition of property, plant & equipment of £181.9m (2010: £248.5m), proceeds from the sale of property, plant & equipment of £0.3m (2010: £0.5m) and interest received of £0.2m (2010: £0.2m). Net financing activities used £10.5m (2010: £88.9m). Dividends paid during the year totalled £36m in respect of the previous financial year. In order to meet the requirements of the above net outflow there was an increase in the financing requirement over the year.

Net debt at 31 March 2011 was £959.2m⁵ (2010: £858.8m⁶). The increase in net debt was financed through an increase in net financial liabilities due after one year. The increase in net debt was financed through an increase in net financial liabilities due after one year.

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).

Regulatory Capital Value

NI Water's closing RCV and the RCV roll forward from the 2009/10 closing balance is set out in NI Water's Regulatory Accounts.

PPP Contracts

Project Alpha:

Project Alpha is a Public Private Partnership (PPP) between NI Water and Dalriada Water Limited (a wholly owned subsidiary of Kelda Water services Ltd).

The project objectives were to provide new water treatment facilities and infrastructure to achieve EU drinking water quality compliance and to operate the facilities for the balance of 25 years delivering bulk potable water to NI Water at 10 delivery points in their distribution network.

The project achieved financial close in May 2006 and service commencement in December 2008. The 25 year Design, Build, Finance, Operate (DBFO) project includes major upgrade work on four existing water treatment works with a total capacity of 400MI/d and the construction of three new link mains totalling 65km at a combined capital cost of £110m.

The facilities will provide NI Water with potable water to the most stringent quality and testing standards in Europe to serve almost 50% of Northern Ireland's population (approximately 850,000) until the year 2031. The four water treatment works are located at Dunore Point, Antrim (180 MI/d), Castor Bay, Craigavon (147 MI/d), Ballinrees, Coleraine (50MI/d) and Moyola, Magherafelt (19 MI/d).

The nominal value of the contract is £507m, typically £18m p.a. plus RPIX at Water Resource Strategy (WRS) demand levels. The £507m can be broken down in nominal terms as follows (figures based on financial model agreed at financial close):

- Initial Capex: £111m
- Lifecycle Maintenance: £27m
- Opex: £237m
- Funding Costs: £132m

⁵ Refer to notes 17 and 19 in the Statutory Accounts. Net debt consists of loans of £737.6m and finance leases of £237.5m less cash and cash equivalents of £15.9m.

⁶ Refer to notes 17 and 19 in the Statutory Accounts. Net debt consists of loans of £627.6m and finance leases of £244.7m less cash and cash equivalents of £13.5m

Project Omega

Project Omega is a Public Private Partnership (PPP) between NI Water and Glen Water Limited (a joint venture company incorporating Veolia Water and Laing O'Rourke).

The project objectives were to provide new and upgraded wastewater treatment facilities at 9 catchments to achieve EU and Northern Ireland wastewater discharge compliance and to operate the facilities for the balance of 25 years. In addition, the project includes for the investment in infrastructure to provide an outlet for 100% of NI Water's wastewater treatment sludge.

The project achieved financial close in March 2007 and service commencement of the last of the facilities contracted for no later than June 2010. The 25 year Design, Build Finance and Operate (DBFO) contract provides a first time compliant wastewater solution for the Bangor/Donaghadee/Millisle area, a rationalisation of three existing works serving the Lurgan/Portadown/Craigavon areas, and upgrades of existing works at Armagh, Richhill and Newtownards.

Along with the construction of a second stream to the existing sludge incinerator at Duncrue Street, Belfast, the project represents a combined capital investment in excess of £122m in Northern Ireland's wastewater/sludge infrastructure. The nominal value of the contract is £640m, typically £23m p.a. plus RPIX at modelled volumes. The £640m can be broken down in nominal terms as follows (figures based on financial model agreed at financial close):

- Initial Capex: £131m
- Lifecycle Maintenance: £43m
- Opex: £275m
- Funding Costs: £191m

Kinnegar Wastewater Treatment Works

Kinnegar wastewater treatment works is a Private Finance Initiative project with Coastal Clearwater Ltd. The objective was to provide an upgraded wastewater treatment facility at Kinnegar, Co. Down, serving the catchment of East Belfast and Holywood.

The Contract reached financial close in April 1999, as a 25 year Design Build Finance and Operate (DBFO) contract for compliant wastewater treatment services for population equivalent of approximately 84,000. The nominal value of the contract is approximately £60m over the 25 years of service.

2010/11 PPP Cash Payments

On Balance Sheet Alpha	£k
Opex	1,795
Interest	12,215
Total P&L Impact	14,010
Capital Repayment	3,278
Life Cycle Maintenance	113
Total Balance Sheet Impact	3,391
Total Unitary Charge	17,401

Effective Interest Rate used to calculate Alpha finance charge	5.8%
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Off Balance Sheet	Omega £k	Kinnegar £k
Opex	21,404	1,966
Residual Interest	2,906	238
Total Unitary Charge	24,310	2,204

Estimated Residual Value at End of Contract

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

Treasury Policies and Objectives

Funding and treasury risk management functions are managed centrally by the Treasury function within our Finance and Regulation Directorate. During the year, the Treasury Forum continued to operate as an advisory body to the Board and the Executive Committee. It performs a review and oversight role for Treasury policies, proposals and the operations of the Treasury function. It also provides a means for approving transactions in accordance with authority delegated from the Board.

Pensions

The NI Water pension scheme (the Scheme) is a separate legal entity with NI Water having the role of "principal employer". The Scheme was set up with a benefits structure which was a 'mirror image' of the Civil Service Scheme in April 2007. The Scheme had 366 pensioners and 1,532 members (active and deferred) as at 31 March 2011.

The Scheme is a funded, defined benefit scheme. It is managed by a board of trustees made up equally of NI Water nominated and member-elected trustees who are legally responsible for managing the Scheme. The Scheme had its first full valuation at 1 April 2008 and this showed that the assets and liabilities were broadly in balance. The contribution rate to the Scheme was revised to take account of this valuation and the investment strategy was also revised to ensure that the return on investments will meet the needs of members going forward.

The Scheme received a bulk transfer from the NI Civil Service Pension Scheme (PCSPS (NI)) on 20 August 2010. This was to cover the cost of providing pensions to employees who had transferred their accrued pension rights from the NI Civil Service Pension Scheme to the NI Water Pension Scheme.

NI Water closed the Premium Section of the Scheme to new starts on 30 November 2010 and replaced it with a career average (CARE) section which the trustees were asked to manage.

During 2011/12, we will:

- Assist the trustees to complete the triennial valuation as at 1 April 2011 which will provide evidence of the necessary funding rate going forward; and
- Work closely with the Scheme's trustees and advisers to ensure the effective running of the scheme to the advantage of all members.

Chapter 3

Key Supporting Information

Tables D and E

Capital Works Programme

Investment in Northern Ireland's water and sewerage infrastructure is essential in order both to meet key environmental standards and to deliver high quality services to customers. Some £130m⁷ of capital engineering projects were delivered during 2010/11. This included the continuation of projects previously started along with the commencement of new projects.

Some 42.4% of this capital programme was targeted at water projects while 57.6% was targeted at wastewater projects. Some 24 projects were completed at high priority wastewater treatment works (WwTWs). This will continue the ongoing work to ensure compliance with the appropriate European Directives and meet the regulatory discharge consent standards.

Improvements to the water treatment works at Lough Bradan (Omagh area) and Carmoney (Londonderry Area) were also completed in 2010/11. Improvements were made to the watermain infrastructure in a number of areas throughout Northern Ireland. Work continued on improving the wastewater network at various locations including Carrickfergus, Bangor and Londonderry.

Approximately £143m⁸ of capital works projects are scheduled for delivery during 2011/12. This includes the continuation of projects previously started along with the commencement of new projects. Work will continue to ensure compliance with the appropriate European Community directives and meet the regulatory discharge consent standards. It is planned to target improvements to the water main infrastructure in a number of areas throughout Northern Ireland. Some 12 zones are programmed for work. This will continue a three year programme of work to reline or replace 900km of water mains throughout Northern Ireland. Work will also continue to improve the sewer network in Londonderry, Newcastle, Downpatrick, Coleraine and other locations throughout Northern Ireland.

Innovation Programme

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

Over 2010/11, we invested approximately £1m on 24 projects through the Innovation Programme. Projects have included the following:

- Upgrading of the central telemetry control system including the associated telemetry data used for remote monitoring of our works;

⁷ UK GAAP based in line with Final Determination

⁸ UK GAAP based in line with Final Determination

- Further development of the Capital Programme Monitoring and Reporting (CPMR) system used to monitor and report on our capital spend;
- The development of network distribution control systems to generate efficiencies in the flows between service reservoirs and water treatment works;
- Pump surveys to identify potential energy efficiencies; and
- Sustainable Catchment and Management Plans (SCaMP) to reduce the level of water treatment required at our works through changes to land management practices.

In 2011/12, we will continue to invest in 17 projects through our Innovation Programme. Projects will include the following:

- Installation of Intelligent Pumping Station Manager control systems;
- Improving coagulation control and monitoring at Water Treatment Works; and
- Continued development of Sustainable Catchment Management Plans.

Operational Effectiveness

We continue to seek improvement of service to customers by improving the performance of our infrastructure. Good operational management and investment in technology drives overall efficiency. Operational management seeks to maintain works, particularly those operating beyond their designed capacity. In reviewing asset performance and careful planning of investment, NI Water seeks to optimise the balance between operational costs and capital investment. In addition, NI Water seeks to introduce new technology to help improve its operational effectiveness and reduce costs. For example, we have installed remote monitoring at 290 Combined Sewer Overflows to provide early warning of problems which will allow us to respond more quickly to events.

Asset Management

We continued to work through the regulatory Price Control process with the submission of a draft Monitoring Plan for the 2010-13 period. However the continuing dependence on the availability of funding through the Public Expenditure process required working collaboratively with CCNI, the environmental regulators, the DRD and the Utility Regulator to review and agree the revised capital investment programme.

We also continue to develop our asset management capability to optimise investment in water and wastewater assets. For example, during the period we have improved the functionality of our Corporate Asset Register. This provides staff with up to date asset information which allows more informed investment decisions to be made.

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.

Supplying an average of 252 million litres of drinking water per day to NI Water from 4 Water Treatment Works, the Alpha Project has positively contributed to NI Water's out performance of its 99.70% Mean Zonal Compliance target.

The Omega project provides a wastewater treatment service for a population equivalent of approximately 300,000, (circa 20% of Northern Ireland's current wastewater treatment capacity). It has maintained compliance with the regulatory wastewater treatment effluent discharge standards over the course of the year and, in so doing, positively contributed to NI Water's compliance targets. In addition, all NI Water's wastewater sludge has been disposed of in accordance with regulations, through this contract.

Water Resources, Supply and Demand

Water Resources

We operated circa 30 water sources which comprised upland impounding reservoirs, boreholes, rivers and loughs. In addition, there were a further 4 sources operated on behalf of NI Water by a Public Private Partnership (PPP) contractor. Water resource planning is managed by way of a long term strategy which considers the demand for drinking water for the period up to 2030. A revised Water Resource Management Plan is currently being prepared and continues to emphasise the need to rationalise existing uneconomic water sources and concentrate on the sources that can meet our needs cost effectively and reliably.

Leakage

Leakage is calculated on a twelve month rolling average. The outturn figure for 2010/11 is heavily influenced by the freeze/thaw event of December/January 2010/11. A category 1 major incident was in operation from the 27 December 2010 to the 6 January 2011. The event caused a significant increase in demand for water supply and at its peak it had increased by over 70% above normal demand. The impact of this increased demand led to significant numbers of customers without a water supply.

Following the event, a review was undertaken by the Utility Regulator and external reviewers. A combined report was issued in March 2011 which recognised that the extreme weather conditions had a major contribution towards the situation, and highlighted that defects or usage on customer properties resulted in at least 80% of this increased demand.

The weather conditions had a significant impact on both domestic and non-domestic customer properties. Therefore, although the recorded twelve month rolling average leakage figure for March 2011 is 177.0 MI/day, which is 2 MI/day above target, this is positive in terms of a comparison with the AIR10 value of 186.9 MI/day.

We are targeting a further reduction in leakage to 171 MI/day in 2011/12. NI Water has both internal and external leakage detection resources focused on proactive leakage detection. In addition, there will be an ongoing emphasis on improving the quality of flow data within the company to assist with improved leakage targeting and reporting. Alongside this capital investment will continue on such areas as pressure management and District Meter Area rationalisation.

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 developing and implementing a sustainable procurement policy which will seek to embed sustainable procurement principles within NI Water procurement processes for the acquisition of goods, services and capital works.
- To engage with key markets to secure capacity within the marketplace to deliver sustainable development priorities.
- To increase access to NI Water's procurement 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 on sustainable procurement principles. 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 goods, services and capital works.

Chapter 4 Efficiency

The completion of the three year Strategic Business Plan period in March 2010 represented the first major step in the transformation process. We started that process with an operational efficiency gap of 48.7%⁹ in 2007/08 between ourselves and the most efficient water companies in England and Wales. Over this three year period, we improved our levels of operational efficiency to reduce the gap to 39.7%¹⁰ in 2009/10.

The projected operational cost efficiency gap is 26% by 2012/13¹¹. We are also working to reduce our capital cost efficiency gap of 17%¹².

We delivered around £53.8m¹³ of efficiencies over the 2007-10 period and continue to control our operating costs in line with the challenging efficiency targets. Over the past year, our focus on efficiencies contributed towards the out performance against the 2010/11 budgeted operational cost base of £210.6m¹⁴ by circa 5%. We will continue to focus on delivering operating and capital efficiencies in the coming year.

Over the past year, our focus on efficiencies contributed towards the out-performance against the 2010/11 cost base of £210.6m¹⁵ by circa 5%. Our profit after tax for 2010/11 of £80.5m¹⁶, is £43.2m¹⁷ higher than 2009/10 primarily due to the transition to IFRS¹⁸ but also as a result of continued focus on cost control. These efficiencies are benefiting customers - we held increases in charges for non-domestic customers in 2011/12 to below inflation¹⁹.

Risk of Failure to Deliver

There is a risk of not being able to deliver the targets within the funding for the PC10 period from April 2010 to March 2013. The Board has taken the necessary steps in the approval of the PC10 funding including a Memorandum of Understanding with the Shareholder on specific risk matters. These targets are extremely challenging. A significant matter for internal control is the capacity of NI Water to continue to achieve the targets for efficiency while maintaining its essential services to customers and the environment. This is exacerbated by the increasing complexity of the changing governance model.

⁹ http://www.uregni.gov.uk/uploads/publications/Final_CP_Report_web.pdf

¹⁰ Provisional figure

¹¹ This projection is based on an internal analysis and may be affected by a wide range of variables which could cause actual results to differ materially from those currently anticipated.

¹² http://www.uregni.gov.uk/uploads/publications/Final_CP_Report_web.pdf. Based on results of latest cost base analysis (2007/08). The gap will be re-measured as part of the next regulatory price control process.

¹³ Based on 2006/07 prices from a 2003/04 base.

¹⁴ UK GAAP based in line with the Final Determination.

¹⁵ UK GAAP based in line with the Final Determination.

¹⁶ Measured on an IFRS basis.

¹⁷ Measured on an IFRS basis.

¹⁸ International Financial Reporting Standards.

¹⁹ Based on retail price inflation.

Business Improvement Programme

Work continued in 2010/11 to transform our organisation into a modern regulated utility. The transformation objectives for 2010/11 included the following:

- Enable delivery of the 2010/11 operational cost efficiencies and prepare the way for the 2011/12 operational cost efficiency target;
- Addressed the legal undertakings and improve the accuracy of underlying data; and
- Deploy systems and technology that will enable further reduction in operational costs and improved regulatory/environmental compliance.

The key themes of enhancing customer service, reducing operational costs and improving data quality will continue to drive business improvement in 2011/12 and for the remainder of the PC10 period.

Delivery of transformation in 2010/11

The Business Improvement Programme comprised seven work streams, co-ordinated by the Business Improvement function and governed by the Business Improvement Steering Group. A brief overview of each work stream is given below:

- *Operational cost efficiencies*: we have continued to reduce headcount and overtime by improving focus and control. A new 'best practice' methodology for the procurement of electricity has been implemented, whilst investments in technology have lowered the expense of out-of-sewer flooding. Budget 'champions' have assisted in managing cost reductions by taking an active role in challenging the need to spend, the specification, introducing tighter controls, buying better, etc. These activities have helped achieve our cost improvement targets in 2010/11 whilst also initiating activity to deliver further cost reductions in the PC10 period.
- *Customer Services*: we are assessing the root causes of call volumes, complaints, billing enquiries and billing contacts to further improve response rates and to reduce overall volumes, particularly following the customer supply issues in December 2010. In addition, NI Water achieved its metered billing target for the first time.
- *Data quality*: we have continued to improve data quality through development of a data ownership and measurement tool and cleansing of meter data and data on customer properties. The Utility Regulator appointed an independent Suitably Qualified Individual (SQI) to assess whether NI Water can be released from the data quality legal undertakings. A decision on the release has not yet been taken.
- *Innovation*: we continue to investigate the increased use of renewable technologies, for example an initial planning application is ongoing for a potential wind turbine development at one of our waste water treatment sites, whilst continued focus is being given to the use of remote monitoring technology on our network.

- *People*: we are working to provide ongoing learning and development for our staff and have delivered a number of in-house training and development courses.
- *Information Technology*: we have made significant strides to improve our disaster recovery position through the implementation of new hardware and communications technology.
- *Finance and Regulation*: we are working to improve the systems to record the costs of maintaining our assets and have achieved registration with the UK Government's mandatory Carbon Reduction Commitment (CRC) energy efficiency scheme.

Delivery of the transformation in 2011/12

The transformation objectives for 2011/12 include the following:

- Implement recommendations resulting from the Utility Regulator's Freeze/thaw report and internal lessons learned;
- Deliver a programme of change to enable the business to achieve the operational cost efficiency targets agreed with the Utility Regulator;
- Improve customer service and billing; and
- Increase organisational capability in the areas of data quality; IT and Finance and Regulation.

The 2011/12 Business Improvement Programme consists of 6 work streams; each comprised of a number of projects some of which are ongoing from 2010/11, whilst others are new projects. The 6 proposed work streams are:

- *Major Incident Review*: this work stream will provide overall progress reporting on delivery of actions contained in the numerous internal and external reports on the freeze/thaw incident in 2010/11;
- *Customer Service*: the customer service work stream will build on the progress made in 2010/11. The work stream will manage projects grouped around the key themes of consistent customer service, effective billing and efficiency in customer service;
- *Operations*: this work stream will focus on the delivery of projects relating to cost improvement, metering and service improvement. A wide range of projects are planned to be delivered focusing on cost reduction through initiatives such as in-sourcing and making better use of in-house skills, reducing overtime and reducing operational contractor costs;
- *Data Quality / IT*: this work stream will build on the progress made last year. The case for release from the data quality undertakings is being considered by the Utility Regulator. In 2011/12, the work stream will focus on concluding the meter data cleanse project and on reconciling our property data across the key NI Water systems;

- *Corporate Structure and Resources* - this work stream will work to identify our future target operating model and associated structure. This will facilitate future resourcing and efficiency plans; and
- *Finance and Regulation* - the Finance and Regulation work stream will continue to progress ongoing projects to deliver a costing model and an upgrade to Oracle Financials. The work stream will also manage planning for the next regulatory price control.

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 2011

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		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	
A HOUSEHOLD - LEAKAGE											
1	Number of household supply pipes repaired	nr	0	495	C5	975	B3	1,114	B3	2,392	B2
2	Number of household supply pipes repaired free	nr	0	0		0	A1	0	A1	37	B2
3	Number of household supply pipes repaired - subsidised	nr	0	0		0	A1	0	A1	0	A1
4	Number of household supply pipes replaced	nr	0	0		0	A1	0	A1	0	A1
5	Number of household supply pipes replaced free	nr	0	0		0	A1	0	A1	0	A1
6	Number of household supply pipes replaced - subsidised	nr	0	0		0	A1	0	A1	0	A1
7	Total savings achieved/assumed	M/d	2	0.00	C5	0.00	A1	0.00	A1	0.05	B3
8	Total cost of initiative	£000	2	0.00		0.00	A1	0.00	A1	10.73	C3
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
10	Number of cistern devices installed	nr	0	0	A1	494	B4	800	B4	1,215	B4
11	Total savings achieved/assumed	M/d	2	0.00	A1	0.02	B4	0.02	B4	0.04	B4
12	Total cost of initiative	£000	2	N/C		1.66	B3	1.60	B3	1.45	B3
13	Number of water butts distributed to households	nr	0	N/C		0	A1	0	A1	0	A1
14	Number of water butts installed	nr	0	N/C		0	A1	0	A1	0	A1
15	Total savings achieved/assumed	M/d	2	N/C		0.00	A1	0.00	A1	0.00	A1
16	Total cost of initiative	£000	2	N/C		0.00	A1	0.00	A1	0.00	A1
17	Number of water audit packs distributed to households	nr	0	N/C		660	B3	3,028	B3	1,967	B3
18	Total savings achieved/assumed	M/d	2	N/C		0.00	B3	0.02	B4	0.01	B4
19	Total cost of initiative	£000	2	N/C		0.53	B3	0.75	B3	0.37	B3
20	Number of water audits carried out by the company in households	nr	0	N/C		500	B1	0	A1	0	A1
21	Total savings achieved/assumed	M/d	2	N/C		0.00	B4	0.00	A1	0.00	A1
22	Total cost of initiative	£000	2	N/C		7.57	B2	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
24	Total savings achieved/assumed	M/d	2	N/C		0.00	A1	0.00	B4	0.00	B4
25	Total cost of initiative	£000	2	N/C		0.00	A1	0.05	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
27	Total savings achieved/assumed	M/d	2	N/C		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
D TOTALS											
29	Total savings achieved/assumed	M/d	2	0.00	C5	0.02	B4	0.05	B4	0.27	B4
30	Total cost of initiatives	£000	2	81.23	B4	84.77	B3	74.39	B3	78.09	B3
E OTHER WATER EFFICIENCY METHODS											
31a	Water Efficiency Publications - leaflets etc.	£	0	N/C		846	B3	1,679	B3	1,647	B3
31b	Water efficiency Promotional Material - magnets etc.	£	0	N/C		5,670	B3	5,142	B3	3,007	B3
31c	Water Efficiency Devices - shower timers etc.	£	0	N/C		4,666	B3	7,944	B3	5,071	B3
31d	Water Efficiency Education - Water Bus etc.	£	0	N/C		63,662	B3	57,218	B3	55,754	B3
31e	Water Efficiency - other measures as per UKWIR-savings included below	M/d	2							0.17	B3
32	Total savings achieved/assumed	M/d	2	N/C		0.00	B4	0.01	B4	0.17	B3
33	Total cost of initiative	£000	2	N/C		74.85	B3	71.98	B3	65.48	B3

Table 1 – 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 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.

The implementation of the Leak Notice process has resulted in savings and efficiencies in terms of increased communication with the consumer to shorten defect run times. However lines do not exist to capture this information as the current table relates solely to free/subsidised repair and replacement of supply pipes.

Line 2 - Number of household supply pipes repaired free

NI Water does not operate a free/subsidised repair/replacement policy for leaking customer supply pipes. However as a direct result of the distribution problems that arose during the Freeze-Thaw event this winter a decision was made to assist customers where possible to conserve water supplies. During this exercise a number of defects were identified as being on the customers supply pipe and were repaired by a contractor on behalf of NI Water.

Line 7 - Total savings achieved/assumed

In order to produce this figure the following assumptions have been made

- The estimated leak per service pipe is assumed to be 0.27 l/s as per the company specific short run Economic Level of Leakage Report produced by Crowders Consulting, November 2009.
- Total leakage per day is based on the company specific hour day factor of 22.8.
- The savings in days per defect is obtained by deducting the actual run time from an average run time of 28 days.

The total savings from this initiative is calculated by the following equation for each defect:-

$$\frac{((\text{Leak rate (0.27 l/s)} * 3600/1000000) * \text{Hour day Factor (22.8)} * (\text{Average Run time of 28 days} - \text{Actual run time}))}{365 \text{ days}}$$

The sum of water saved for all defects repaired is presented in Ml/day.

Line 8 - Total cost of the initiative

During the Freeze-Thaw event the contractor involved in investigating private side leakage was employed on a day rate basis across the province and over a large number of sites. Subsequently the costs associated with specifically supply pipe leakage are an estimate of the activities involved in the repair process plus NI Water staff input. The total cost is obtained by adding the estimated cost of undertaking supply pipe repairs plus the estimated cost of NI Water staff involvement.

Lines 9 - 33 Water Efficiency Methods**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 percent of their time is spent promoting water efficiency.

The key elements of our strategy are as follows

1. efficient use of water in the home
 - a) ensuring no leaks from taps, toilets, pipe joints etc
 - b) cistern displacement devices used where necessary.
 - c) efficient use of domestic appliances e.g. full load for washing machine, dishwashers and care as to the machine selected (water saving)
 - d) use of showers rather than baths and shower timers to reduce time spent in the shower
 - e) shower heads and water tap aerators are recommended
2. efficient use of water in the garden

WET have attended a variety of external public events

- 110 years of Girl Guiding Sponsored walk
- Colin Environmental Fair, Belfast -April
- Banks of Ballinderry River Fair -May
- Environmental Fair at Black Lough
- Water Saving Week -11th-18th June, 4 days at B&Q
- Discovery Centre at Oxford Island
- National Trust Properties-Rowallane, Mount Stewart, Castlewellan-July and August
- European Heritage Open Day -September
- Two Family Fun days held at Silent Valley Mountain Park - August 2010 and March 2011
- Lifestyle Green Show- September

- Harvest Fair at National Trusts Mount Stewart -October

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

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

- Homestart - mother and toddler groups
- Volunteer Now- Belfast groups
- Inner Wheel groups
- Help the Aged
- Rotary and Probus groups
- Church groups
- Falls Park Wildlife Group
- Chest Heart and Stroke Assoc.
- City of Derry Hotel employees
- Girl Guide Association staff at Lorne
- Citizens Bazaar at Glastery College

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). For 2010/11 the figure requested from CRC was 26 (included with March figures in the Table below). NI Water has distributed 2510 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 2010/11.

Month	No Distributed at School visits	No Distributed at Community visits	No Distributed at shows	Requested Community	Monthly Total
April 10	152	60	0	49	261
May 10	32	143	20	100	295
June 10	42	35	243	32	352
July 10	0	34	44	0	78
August 10	0	0	352	1	353
Sept 10	30	92	50	0	172
Oct 10	43	25	257	0	325
Nov 10	32	107	105	0	244
Dec 10	15	28	40	0	83
Jan11	35	79	0	0	114
Feb 11	43	35	0	0	78
March 11	40	90	10	41	181
Annual Total	464	728	1121	223	2536

The calculation for the water savings achieved in 2010/11 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:

$$2.5*2.5*5*(1121*0.2) = 7006.25 \text{ l/per day} = 0.007 \text{ MI/d}$$

70% installation rate for those from CRC requests, community requests, those given to schools and community talks with a total of (1415),

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

Calculation:

$$2.5*2.5*5*(1415*0.7) = 30953.125 \text{ l/per day} = 0.0309531 \text{ MI/d}$$

Giving a total of 0.0379531 MI/d

The cost of the initiative was calculated by multiplying the no of hippo bags 2536 by the cost per bag giving £1,445.

Lines 13 - 16 Water Butts Distributed to Households

For the report year 2010/11 NI Water have not distributed waterbutts to households. NI Water has promoted the use of waterbutts through leaflet distribution. During 2009/10 NI Water developed a relationship with a large national DIY company with a view to working together to promote waterbutts and water efficiency items for the home but this has progressed no further to date.

Lines 17 - 22 Water Audits: Household

During 2010/11 the self water audit for domestic households which can be accessed through the company's website has not been taken up well by visitors to the site, there have however been 238 hits to the on line audit and 5 audits having been completed online. To overcome this, 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 2010/11 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 waterbutt, watering cans and drought resistant seeds. The school with the highest percentage of returns will receive a cash prize. This initiative will run until the end of May 2011 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%.

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 1690 and the number of audits returned was 291 which is a return rate of 17.2%.

39 audits distributed as community request making a total of 1729. It has been assumed that completed audit achieved savings of 10 litres per property per day.

Calculation:

$$1729 * 0.70 * 10 = 12103 \text{ l/per day} = 0.012103 \text{ MI/d}$$

From the figures supplied by IT division of the Corporate Affairs Team, 238 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:

Calculation: $238 * 0.10 * 10 = 238$ l/per day = 0.000238 MI/d

Total savings figure for domestic audits 0.012341MI/d

The total number of audits is the addition of the number of audits distributed through 'Spread the Word' (1690) plus the number distributed to the community (39) plus the number of visitors to the online audit (238), giving a total 1967

Water Audits Completed by Company in Households

No audits were completed in the homes of customers.

The company met with the Housing Executive (HE) re any new refurbishment work they intended to do in the 10/11 period but work has been postponed until HE budget becomes available. Permission was granted for two pieces of work to commence and as a result NI Water put meters in these areas to capture data prior to commencement of the work. NI Water intends to make provision to collect the data after new Water Efficiency products are installed. It should be noted that the HE only use inexpensive products and install baths and not showers. It was requested that all HE contractors contact NI Water's External Communications Manager prior to doing any installations and in turn they would be forwarded a guide on Water Efficiency products that they should use.

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.

The Energy Saving Trust have developed an on-line interactive house and by clicking on energy using items within the house the customer's energy bill is calculated and also the savings that can be made by reducing the number of times each item is used. NI Water will investigate securing funds to have an adopted version of the on-line interactive house on our own website. The cost of this will be £10k.

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 2010/11 319 Water Audits for Schools were distributed by WET through Teachers Packs. To calculate the savings achieved through this initiative it is necessary to make assumptions on the savings achieved (Ofwat Water Efficiency Targets 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:

$$319 * 0.20 * 10 = 638 \text{ l/per day} = 0.000638 \text{ MI/d}$$

Totals

Lines 29 - 30 Totals

Savings

These savings have been achieved through Section A (Leakage), 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 0.215962 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 £
Leakage	0.05	10730
Household		
Cistern Devices	0.0316531	1,445.00
Self Water audits	0.012341	368.51
Non Household		
School Audits	0.000638	62.84
Other Methods		
Shower timers (see below)	0.0037	5071.10
UKWIR-Softer Measures (see below)	0.16763	included in Education Dept
Leaflets (see below)		1646.56
PR items(see below)		3007.27
Education Dept		55,745

Total	0.215962	78,076
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The calculation of costs due to staffing has been calculated using accepted methodology from the AIR10 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 8000 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 can not be calculated.

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

Efficiency Method	Name	Number	Cost £
Leaflet	Water Butt	1105	243.10
	How water wise are you	7073	807.97
	Hippo Bag	2536	517.34
	Drought gardening	953	78.15

Total leaflets			1646.56
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PR Item	Bookmark-Saving Water	497	56.66
	Bookmark-“Flo” Kids saving water	1479	168.15
	Seeds: Drought Resistant	745	2166.55
	Adult Magnet	299	167.44
	Magnet-H2O magnet	1436	402.08
	Game: Snakes and Ladders	141	.39
Total PR			3007.27
Measurable	Shower timers	3230	5071.10

Over the reporting year 3230 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 (Ofwat Water Efficiency Targets). The calculation for the savings achieved in 2010/11 report year is as follows:

D*I*S = Savings in litres

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

Calculation: $3230 * 0.23 * 5 = 3714.50$ l/per day = 0.0037 MI/d

Behavioural change activity has led to our customers becoming more efficient in their use of water and the UKWIR method is now being used to quantify the water saving benefits for “softer measures” (2010 reporters recommendation 1, (document reference) T1niw.R10 P1 S2). This shows a significant improvement in water efficiency figure.

I have used the UKWIR spreadsheet WR25 “Estimating water saving calculator for baseline water efficiency”. I have apportioned these activities between Low, Medium and High Levels of engagement. This is summarised in the following table.

Level of Engagement	Litres/day	MI /day
High	143318.9	0.143
Medium	18620.7	0.019
Low	5690.4	0.006
Totals	167630	0.168 MI/day

The theme of the Education Schools Competition, 2010/11, open to all primary schools through Northern Ireland was "Save Water" the competition ran from September 10 to March 11. The pupils had to create a poster or rap encouraging people to save water. It has been our most successful to date with over 1900 entries. Compare this to the same theme in 2009, with 765 entries.

During the reporting year 2010/11 NI Water has regularly updated its existing website (www.niwater.com).

NI Water educational microsite. "What are you doing about water" (<http://www.niwater.com/education/index.html>) for ages 6 to 14 years, builds upon the efficiency element. Sections include the Water Cycle and Save Water. The subsection "How much water" calculates a household's daily use of water, "How do I save water" gives advice in the home and tips for water use in the garden and within schools. It has been well received by both teachers and pupils and is widely used for "investigation" in the revised curriculum and is a valuable tool to both schools, education establishments and the company. The website was nominated for the following awards during 2009: for CIPR National Excellence Award 2009, CIPR PRide Award (NI) – received Silver Award (runner up) and Golden Spider Award.

The Education pages of the Website, 6 Conservation Worksheets for pupils have been created and are ready to go live at <http://www.niwater.com/educationatniw.asp>.

NI Water have dedicated website pages with advice on household water efficiency and also promoting water efficiency amongst commercial users. 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.

"Youtube" video on "Saving Water" (featured the Education Department staff), was made by NI Water's Corporate Affairs Team has had 347 hits on the site <http://www.youtube.com/northernirelandwater> to date. It promotes water saving tips around the home and garden. The video was released during Water Saving Week (11th -18th June) which was supported using the Waterbus at several B & Q sites to promote water efficiency, encouraging the public to pledge to do one thing to save water for the rest of their life.

NI Water has highlighted throughout the year the issue of water efficiency and in particular the potential for frozen pipes. During the "big freeze" of December and January the statement of "Wrap up warm this winter" was released to all daily and regional papers as well as broadcast. Last year's "Youtube" video on "Protect Your Pipes this Winter" which was produced by NI Water's Corporate Affairs Team was widely publicised again. There have been 2,874 hits on the site <http://www.youtube.com/northernirelandwater> to date."

Figures for freeze/ thaw incident:

29th November -23rd December:

- 63 interviews & emails to stakeholders

27th December to 5th January:

- 54 media interviews & information statements distributed to media
- 21 statements issued to media & stakeholders

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. 2009/10 0.0479MI/day compared to 0.216 MI/day for 2010/11 this is an encouraging result which might be built upon.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

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

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	
A DG2 PROPERTIES RECEIVING PRESSURE/FLOW BELOW REFERENCE LEVEL											
1	Total connected properties at year end	000	1	800.0	A2	804.4	A2	798.7	A2	806.4	C2
2	Properties below reference level at start of year	nr	0	N/C		10,321	B4	5,770	B4	2,248	B4
3	Properties below reference level at end of year	nr	0	10321	B4	5770	B4	2154	B3	2,020	B3
4	Properties receiving low pressure but excluded from DG2	nr	0	N/C		218	B4	94	B3	0	B3
4a	DG2 Properties with pressure below a surrogate level of 7.5m at end of year	nr	0			320	B2	169	B2	173	B2
4b	DG2 Properties at risk of low pressure removed from the risk register by company action	nr	0							283	B3
4c	Average capex cost of permanent solutions to DG2 problems	£000/prop	1							13.7	C4
B DG3 PROPERTIES AFFECTED BY SUPPLY INTERRUPTIONS											
(i) UNPLANNED INTERRUPTIONS											
5	More than 3 hours	nr	0	60,662	B3	56,480	B3	47,970	B3	529,448	B3
6	More than 6 hours	nr	0	9,483	B3	8,175	B3	9,427	B3	476,289	B3
7	More than 12 hours	nr	0	1,839	B3	2,010	B4	3,675	B3	214,274	B3
8	More than 24 hours	nr	0	72	B3	609	B4	2,294	C4	40,959	B3
(ii) PLANNED AND WARNED INTERRUPTIONS											
9	More than 3 hours	nr	0	39,237	B3	48,163	B3	43,341	B3	27,547	B3
10	More than 6 hours	nr	0	20,273	B3	26,480	B3	22,460	B3	10,025	B3
11	More than 12 hours	nr	0	62	B3	0	B4	135	B3	0	B3
12	More than 24 hours	nr	0	0	B3	0	B4	0	B3	0	B3
(iii) INTERRUPTIONS CAUSED BY THIRD PARTIES											
13	More than 3 hours	nr	0	1,472	B3	2,477	B3	2,737	B3	978	B3
14	More than 6 hours	nr	0	510	B3	36	B3	499	B3	699	B3
15	More than 12 hours	nr	0	22	B3	33	B4	154	B3	63	B3
16	More than 24 hours	nr	0	6	B3	4	B4	0	B3	30	B3
(iv) UNPLANNED INTERRUPTIONS (OVERRUNS OF PLANNED INTERRUPTIONS)											
17	More than 6 hours	nr	0	835	B3	590	B3	452	B3	1,418	B3
18	More than 12 hours	nr	0	99	B3	43	B4	118	B3	2	B3
19	More than 24 hours	nr	0	0	B3	8	B4	1	B3	0	B3
C POPULATION											
20	Population (winter) (total)	000	2	1,771.11	B2	1,800.32	B2	1,805.80	C2	1,814.34	C2
D DG4 RESTRICTIONS ON USE OF WATER											
21	% population - hosepipe restrictions	%	1	0.0	A1	0.0	A1	0.0	A1	0.0	A1
22	% population - drought orders	%	1	0.0	A1	0.0	A1	0.0	A1	0.0	A1
23	% population - sprinkler/unattended hosepipe restrictions	%	1	0.0	A1	0.0	A1	0.0	A1	0.0	A1

Table 2 – Key Outputs - Water Service - 2**Line 1 - Total connected properties at year end**

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

It is NIW's intention to automate the production of this report via the DIAMOND database reporting tool over the forthcoming reporting year for use in AIR12. NIW would then expect the confidence grade for this table to improve.

DG2 Properties receiving pressure/flow below the reference level**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'. In line with this the target for the year 2010/11 was the removal of 220 properties. The primary means of achieving these removals is 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 2 - Properties below the reference level at start of year

The number of properties on the Register at the start of the year was 2154, as reported in line 3 of the AIR 10 submission. Recent guidance, as issued by NIAUR, has indicated that this now should include properties within 10m height of service reservoirs which previously were defined as allowable exclusions. As a result this figure should now be revised to include the original figure of 2154, plus the number of properties previously identified as being within 10m of service reservoirs, 94, providing a total of 2248. It should be noted that NI Water will not be able to provide such properties with adequate pressure through normal hydraulics. Therefore they will continue to be included in the DG2 Register.

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

As per the 2010 Regulatory guidance, as issued by NIAUR, this line now includes properties within a 10m height of service reservoirs. Therefore the final number of properties recognised as being below the reference level at end of year is 2020.

The year end figure is the direct result of removals due to Company Action, removals due to better information and additions due to 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 or added to the Register during the report period are supported by a report and appropriate logged data. The AIR 11 Table 2 Methodology statement outlines in detail the additions and removals process.

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 Post Project Rehabilitation Appraisal reports were received for 8 work packages, see Table 1 below, resulting in 237 properties being removed from the DG2 register due to company action.

Table 1

Rehabilitation Scheme	DG2 Properties Removed
Loughguile	2
Rasharkin	1
Derg West	1
Craigavon	64
Casheltown	1
Altmore Gortlenaghan	63
Castor Bay Shanmoy	5
Limavady	100
Total	237

Loughguile PPRA – This portion of work was developed from the Altnahinch Design Zonal Study and was completed between January 2008 and May 2009. A total of 27 km of mains were rehabilitated and as a result of this work 2 properties were removed from the register based on the submission of a DG 2 Investigation Report.

Rasharkin PPRA - This mains rehabilitation construction phase was conducted between January 2008 and January 2009. It incorporates a variety of hydraulic, operational and water quality solutions to improve the condition and performance of the distribution network. A total of 17.5 km of mains were rehabilitated under this work package removing 1 property from the DG2 register.

Derg West PPRA – Capital investment led to the replacement of 49 km of watermains following the South West Design Zonal study to improve network performance in this rural area. The work package was completed between April 2008 and October 2009 and enabled 1 property to be removed from the register

Craigavon PPRA – Rehabilitation works in the Lurgan and Portadown areas were ongoing from June 2008 until March 2009. A variety of hydraulic, operational and water quality solutions resulted in 64 properties being removed from the register.

Casheltown PPRA – Rehabilitation work was undertaken in the rural area north of Randalstown concluding in April 2009. In total 15 km of watermains were rehabilitated enabling 1 property to be removed from the register

Altmore Gortlenaghan PPRA – The construction phase concluded in March 2009, resulting in the replacement of 21km of watermains in both rural and

urban areas around Coalisland and Castlecaulfield. Improvement to the network resulted in 63 properties being removed from the DG2 register.

Castor Bay Shanmoy PPRA – A total of 27 km of watermains were replaced between January and December 2010 to contribute to improved network performance. This work allowed 5 properties to be removed from the register.

Limavady PPRA – The rehabilitation construction phase concluded in April 2010 and involved the replacement of 19 km of watermains in both urban and rural areas to improve network performance. This resulted in 100 properties being removed from the 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.

In addition a total of 46 properties were removed during the year due to infrastructure improvements undertaken by the Leakage function. These schemes are highlighted in Table 2 below

Table 2

Infrastructure Improvements	DG2 Properties Removed
Creevagh	2
Knockan	4
Wanstead	11
Ballyarnet	29
Total	46

A total of 21 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 3 below and aligned to their corresponding District Meter Areas.

Table 3

Better Information	DG2 Properties Removed
Dundrod	1
Ballyknock Toberdoney	3
Slievenalargy	1
Plantation Road	4
Backford Bridge	1
Killeeshil	1
Mullaghanagh Blacklough	1
Ardnarive	1
Brishey	1
Coa	5
Kilmore Stonebridge	2
Total	21

Finally 76 properties have been added to the register on the basis of better information being provided complete with appropriate information as per the adopted additions/removals process. They are included in Table 4 below.

Table 4

Better Information	DG Properties Added
Ballyhoy to Armagh	15
Ballymaginaghy	1
Redhills	1
Rehaghy	1
Rathmore Road	18
Pond Park	7
Killyfast	6
Belfast Road Bangor	27
Total	76

The total DG2 movements during the year are summarised in Table 5 below.

Table 5

Year Start	2248
Removals due to PPRAs	237
Removals due to infrastructure improvements	46
Removals due to better information	21
Sub-total	1944
Additions due to better information	76
End of year Total	2020

Line 4 - Properties receiving low pressure but excluded from DG2

There are currently 0 properties that are justifiably covered by the exclusions covered in the guidance notes. In previous years properties within 10m height of service reservoirs were defined as allowable exclusions. However as a result of recent guidance issued by NIAUR such properties must now be included in the Register.

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 173 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 achieved by adding the properties identified in Tables 1 and 2 above.

Table 4

Removals Due to Company Action	Number
Rehabilitation Schemes	237
Infrastructure Improvements	46
	283

The final number of properties removed due to Company Action is recorded in Table 4 above as 283. This has exceeded the yearly target of 220 and as such reflects good progress towards achieving the overall PC10 target of the removal of 800 properties from the register as a result of company action.

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

The construction work on these Work Packages (WP)s was carried out during the Strategic Business Plan period and as such the capital spend is not from the PC10 period. The reason for the lag period is described on the following page.

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 first 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 A3 stage.

PPRA reports for eight WPs were produced during 2010-11 which removed a total of 237 properties from the register. These are detailed in the table below.

Rehabilitation Scheme	DG2 Properties Removed	Cost Attributed to DG2 Removals	Modelled Future Level Of Service Failures
Loughguile	2	645,286	2
Rasharkin	1	0	9
Derg West	1	103,648	19
Craigavon	64	939,975	1876*
Cashelton	1	1,442,552	21
Altmore Gortlenaghan	63	355,829	95
Castor Bay Shanmoy	5	333,066	503
Limavady	100	47,195	740
Total	237	3,867,551	1453
Average cost per DG2 removal		£16,319	£2,662

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. In the above table for Craigavon the model predicted 1876 LoS failures but a significant number of these were due to a PC10 Trunk Main so the figure of 64 was used in the calculation.

In addition to the removal of properties following the receipt of a PPRA report there have been a number of properties removed as a result of infrastructure improvements. These are listed in the table below.

Infrastructure Improvements	DG2 Properties Removed	Cost Attributed to DG2 Removals
Creevagh	2	£5675
Knockan	4	£6454
Wanstead	11	£5675
Ballyarnet	29	£9421
Total	46	£27,225

Therefore the average overall cost of removing a DG2 property from the register is obtained by combining the total cost (£3,867,551 and £27,225) and dividing by the total number of properties removed i.e. 237 (PPRA reports) + 46 (Infrastructure Improvements) = 283.

Average cost per DG2 removal = £13.7k.

Comments on Specific Work Packages

There is no cost against the removal of the DG2 property in Rasharkin as the property is now fed from an adjacent DMA in a WP that was included in previous returns.

The Casheltown WP consists of mostly trunk mains which will rationalise the network in that area and will be part of the solution to DG2 properties in neighbouring WPs, allow four undersized reservoirs to be abandoned, improve security of supply and reduce Iron pickup from unlined iron mains that it is indirectly replacing. A reservoir extension is required before all the schemes in one of these WP can proceed. This is why the cost appears so high for the removal of a single DG2 property in the Casheltown WP.

Conversely the cost for resolving 100 DG2 properties in Limavady WP demonstrates excellent value as the replacement of 300m of 3" main resolved a large number of properties, that were only just below the 15m surrogate pressure threshold.

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 the process included in the company PC10 Business Plan.

Work Packages awaiting PPRA

A spreadsheet listing the WPs awaiting the completion of the PPRA reports was produced and it identifies the estimated number of DG2 properties to be removed using predicted pressure from Hydraulic Modelling. The pressure will be confirmed by logging before formal removal from the register. The table below lists the WPs, the number on the register within the WP boundary and the predicted number of properties removed.

Work Package Name	Construction End Date	No of properties to be removed
WP31 Ballynahone Ph 1	May-09	2
WP58 Ballynahone Ph 2	Jul-09	0
WP26 Portballintrae Ph1	May-09	0
WP67 Portballintrae Ph 2	Apr-10	14
WP62 Lisburn Urban	Apr-10	52
WP64 Castor Bay Banbridge	Mar-09	10
WP74 Carnmoney East	Sep-10	8
WP73 Waterside	May-10	0
WP33 Ballinrees Central	Sep-10	1
WP56 Belfast City Centre	Apr-10	0
WP69 Ballygown	Apr-10	50
WP68 Mid-Down	Mar-10	7
WP70 Tardree Ph 1	Jul-10	8
WP27 Ballycastle	Sep-10	13
WP55 Fofanny Banbridge Ph1	Sep-09	35

Removals Pending

It should be noted that currently 200 properties have been identified for removal from the DG2 register due to the planned completion of PPA reports during 2011/12 as the direct result of company action via rehabilitation works.

Lines 5 to 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. The calculation, checking and presentation of figures is explained in the Line Methodology for AIR10: Table 2: Lines 5 to 19. 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 806,444 as confirmed by Customer Services.

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

For the second year in succession, the winter weather has had a significant impact on NI Water's pledge to reduce the percentage of properties affected by unplanned interruptions to the water supply exceeding 6 hours. December was the coldest calendar month for over 100 years and saw unprecedented numbers of "no water" complaints taken by the Company's Customer Response Centre and numbers of properties affected by unplanned interruptions. At the height of the operational difficulties on 29 December, approximately 117,000 properties were without supplies, 96,000 as a result of supply rotation, 18,000 as a result of service reservoir drain-down and 3,000 as a result of burst mains and other causes.

In 2009/10, the impact of the Freeze/Thaw was greatest in the rural northwest parts of the province. In 2010/11, the impact was more widespread and numbers of affected properties were particularly high in urban areas such as Belfast. As the severe winter weather had such an adverse impact on DG3 performance, NI Water has provided in its AIR11 commentary, a summary of its outturns:

- including the early and late December Freeze/Thaws,
- excluding the late December Thaw only,
- excluding the late December Freeze/Thaw and
- excluding the early and late December Freeze/Thaws.

The exclusion of properties affected by supply rotation, service reservoir drain-down and all other causes of interruption related to the late December Freeze/Thaw allows a truer comparison to be made with the statistics of previous years when the winters were less severe. The Company believes it is also appropriate to take account of an earlier and less prolonged freeze/thaw event in December which was largely unpublicised but which required the Major Incident Team to be instigated. According to the final upward report issued at the time of the early Freeze/Thaw, the event started on 8 December with incident teams being stood down on 12 December.

Table: Impact of Freeze/Thaw on Outturn Numbers of Properties Affected by Unplanned Interruptions

AIR	Time Band	2008/09	2009/10			2010/11			
		Outturn	Outturn Including Freeze/Thaw	Outturn Excluding Frozen Comms. Pipes Only	Outturn Excluding Freeze/Thaw	Outturn Including Early & Late Dec Freeze/Thaws	Outturn Excluding Late Dec Thaw Only (Note 3)	Outturn Excluding Late Dec Freeze/Thaw (Note 2)	Outturn Excluding Early & Late Dec Freeze/Thaws (Notes 1 & 2)
Table 2: Line 5	>3hr	56,480	47,970	46,406	36,032	529,448	55,767	51,744	47,454
Table 2: Line 6	>6hr	8,175	9,427	7,863	4,473	476,289	17,531	14,754	12,409
Table 2: Line 7	>12hr	2,010	3,675	2,111	1,395	214,274	6,319	4,147	3,997
Table 2: Line 8	>24hr	609	2,294	730	347	40,959	2,517	1,872	1,846

Note 1: The early December Freeze/Thaw commenced on 08 December and lasted until 12 December.

Note 2: The late December Freeze/Thaw commenced on 21 December and lasted until 6 January.

Note 3: The late December Thaw commenced on 27 December and lasted until 6 January.

Table: Numbers of Properties Affected by Interruptions Relating to Freeze/Thaw

AIR	Time Band	2009/10				2010/11		
		Frozen Comms. Pipes	All Other Causes of Unplanned Interruption during Freeze/Thaw	Supply Rotation	SR Drain-down	All Other Causes of Unplanned Interruption during Freeze/Thaw		
						Early Dec Freeze/Thaw (Note 1)	Late Dec Freeze/Thaw (Note 2)	Late Dec Thaw Only (Note 3)
Table 2: Line 5	>3hr	1,564	10,374	442,767	25,439	4,290	9,498	5,475
Table 2: Line 6	>6hr	1,564	3,390	431,049	25,439	2,345	5,047	2,270
Table 2: Line 7	>12hr	1,564	716	181,140	25,439	150	3,548	1,376
Table 2: Line 8	>24hr	1,564	383	24,441	13,622	26	1,024	379

All four outturns for properties affected by unplanned interruptions are heavily influenced by the impact of the two Freeze/Thaw events of December and particularly, by the impact of supply rotation and service reservoir drain-down. Many properties would have experienced more than one distinct interruption when supply rotation was introduced to allow service reservoir levels to recover.

With the impact of the early and late December Freeze/Thaws removed, the figures are still higher than in 2008/09 when the winter was relatively mild. An interruption caused by a burst main on the Head Road, Kilkeel in early February had a significant impact on performance. An interruption caused by a burst main on the Mill Road, Crumlin in late January, heavy snow and resultant power failures at the start of April, and higher than average rainfall and resultant ground movement in July have also contributed to underperformance during the year. These incidents are discussed in further detail in the section on Major Incidents.

Planned and Warned Interruptions

AIR	DG3 Properties Affected	2008/09	2009/10	2009/10
Table 2: Line 9	More than 3 hours	48,163	43,341	27,547
Table 2: Line 10	More than 6 hours	26,480	22,460	10,025
Table 2: Line 11	More than 12 hours	0	135	0
Table 2: Line 12	More than 24 hours	0	0	0

The number of properties affected by planned and warned interruptions lasting more than 3 hours has fallen over the last three years, by 4,822 properties between 2008/09 and 2009/10 and by a further 15,794 properties between 2009/10 and 2010/11.

The number of properties affected by planned and warned interruptions lasting more than 6 hours has fallen over the last three years, by 4,020 properties between 2008/09 and 2009/10 and by a further 12,435 properties between 2009/10 and 2010/11.

The >6hr and >12hr time bands have seen significant reductions in numbers of affected properties over the last year. The reduction is primarily due to a reduction in meterage installed under the Watermains Rehabilitation Programme. Watermain distribution meterage installed in 2010/11 was 197km compared to 351km in 2009/10.

No properties experienced planned and warned interruptions lasting more than 12 hours in 2010/11 compared to 135 in 2009/10 and 0 in 2008/09.

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

Interruptions Caused by Third Parties

AIR	DG3 Properties Affected	2008/09	2009/10	2010/11
Table 2: Line 13	More than 3 hours	2,477	2,737	978
Table 2: Line 14	More than 6 hours	36	499	699
Table 2: Line 15	More than 12 hours	33	154	63
Table 2: Line 16	More than 24 hours	4	0	30

The number of properties experiencing interruptions caused by third parties lasting more than 3 hours, increased by 260 between 2008/09 and 2009/10 but decreased by 1,759 between 2009/10 and 2010/11.

The number of properties experiencing interruptions caused by third parties lasting more than 6 hours has risen over the last three years, by 463 properties between 2008/09 and 2009/10 and by a further 200 properties between 2009/10 and 2010/11.

The number of properties experiencing interruptions caused by third parties lasting more than 12 hours, increased by 121 between 2008/09 and 2009/10 but decreased by 91 between 2009/10 and 2010/11.

30 properties experienced interruptions caused by third parties lasting more than 24 hours in 2010/11 compared to 0 in 2009/10 and 4 in 2008/09.

Unplanned Interruptions (Overruns of Planned Interruptions)

AIR	DG3 Properties Affected	2008/09	2009/10	2010/11
Table 2: Line 17	More than 6 hours	590	452	1,418
Table 2: Line 18	More than 12 hours	43	118	2
Table 2: Line 19	More than 24 hours	8	1	0

The number of properties experiencing overruns of planned interruptions lasting more than 6 hours decreased by 138 between 2008/09 and 2009/10 but increased by 966 between 2009/10 and 2010/11. In June, 1,250 properties experienced an overrun when a planned interruption to carry out a new mains tie-in ended 5 hours later than expected. The work involved a 400mm connection within obstructed ground. Completion proved very difficult due to unforeseen misalignment of the pipework and the work was eventually abandoned. As the interruption was due to end at 00:30, the overrun period occurred within overnight hours and supplies were restored before breakfast time. With hindsight, the interruption should have been planned for 12 hours.

The number of properties experiencing overruns of planned interruptions lasting more than 12 hours increased by 75 between 2008/09 and 2009/10 but decreased by 116 between 2009/10 and 2010/11.

No properties experienced overruns of planned interruptions lasting more than 24 hours in 2010/11 compared to 1 in 2009/10 and 8 in 2008/09.

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 and 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.

Interruption Category	Outturn		08/09 KPI Target (%)	Outturn		09/10 KPI Target (%)	Outturn Including Early & Late Dec Freeze/Thaws		Outturn Exc. Late Dec Thaw Only (%)	Outturn Exc. Late Dec Freeze/Thaw (%)	Outturn Exc. Early & Late Dec Freeze/Thaws (%)	10/11 KPI Target (%)
	2008/09 (Props)	2008/09 (%)		2009/10 (Props)	2009/10 (%)		2010/11 (Props)	2010/11 (%)				
>6hrs	U/P	8,175	1.016		9,427	1.180	See Total					
	UTP	36	0.004		499	0.062	Target excludes third party interruptions					
	O/R	590	0.073		452	0.057	Target excludes overruns					
	Total	8,801	1.094	1.20	10,378	1.299	1.00	476,289	59.060	2.17	1.83	1.54
>12hrs	U/P	2,010	0.250		3,675	0.460	See Total					
	UTP	33	0.004		154	0.019	Target excludes third party interruptions					
	O/R	43	0.005		118	0.015	Target excludes overruns					
	Total	2,086	0.259	0.15	3,947	0.494	0.15	214,274	26.570	0.78	0.51	0.50
>24hrs	U/P	609	0.076		2,294	0.287	See Total					
	UTP	4	0.000		0	0.000	Target excludes third party interruptions					
	O/R	8	0.001		1	0.000	Target excludes overruns					
	Total	621	0.077	0.01	2,295	0.287	0.01	40,959	5.079	0.31	0.23	0.23

Note 1: Percentage outturns are based on total connected properties as follows: 804,418 (AIR09); 798,740 (AIR10); 806,444 (AIR11)

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). In 2010/11, third party interruptions and overruns were excluded for the first time.

The outturns have exceeded all three DG3 KPI Targets. Had it not been for the severe winter weather and the Kilkeel and Crumlin incidents, the Company believes it would have met all three targets for supply interruptions.

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 2010/11 whose Interruption Start Date/Time and All Props Restored Date/Time fell within the hours of 12 midnight and 7am.

Interrupt Type	Interruption No.	Interruption Start		All Props Restored		Duration (Hours)	Properties Affected	
		Date	Time	Date	Time		> 0 Hrs	> 3 Hrs
Unplanned	12701	07/06/10	01:00	07/06/10	05:00	4	933	933
Unplanned	13881	03/10/10	01:00	03/10/10	04:30	3.5	60	60
Unplanned	13674	13/10/10	00:00	13/10/10	03:15	3.25	155	155
Unplanned	14811	01/01/11	00:30	01/01/11	04:00	3.5	10	10
Unplanned	15084	31/01/11	00:15	31/01/11	03:30	3.25	50	50
Unplanned	15362	08/03/11	02:00	08/03/11	06:00	4	2	2

Both the Metering Team and Leakage function are responsible for interruptions to supply that are of a relatively short duration. Interruptions lasting less than 1 hour are not, as a rule, recorded by NI Water. Step testing is usually carried out at night to reduce the impact of loss of supply to customers.

6 unplanned records have been identified where customers would not have noticed the loss of service because it occurred at night. All 6 interruptions lasted 6 hours or less. The number of properties affected by these interruptions was 1,210, representing 2.5% of the total number of properties experiencing unplanned interruptions lasting more than 3 hours in 2010/11 (excluding impact of early and late December Freeze/Thaws).

$$\text{Unplanned: } (1,210 / 47,454) \times 100 = \mathbf{2.5\%}$$

NI Water reported in its AIR10 commentary that there were 15 unplanned interruptions and 8 planned interruptions where customers would not have noticed the loss of service because it occurred at night. The numbers of properties affected by these interruptions was 7,234 unplanned and 200 planned.

Interruptions of 3 hours or less occurring at night

NI Water has a record of 220 unplanned interruptions and 2 planned interruptions 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 141,362 unplanned and 32 planned.

NI Water reported in its AIR10 commentary that there were 231 unplanned interruptions and 6 planned interruptions 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 139,918 unplanned and 117 planned.

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

The following table provides a summary of all the overruns of planned and warned interruptions lasting 6 hours or less in 2010/11.

Interrupt. No.	Month	Duration (Hours)	Properties Affected		Duration Of Overrun (Hours)
			> 0 Hrs	> 3 Hrs	
12345	Apr 10	2.75	17	0	1.00
12404	Apr 10	3.25	9	9	1.75
12418	May 10	4.50	39	39	2.50
12691	Jun 10	5.5	63	63	0.50
12832	Jun 10	5.5	60	60	0.50
12852	Jun 10	4	38	38	2.00
12909	Jul 10	3	26	0	1.00
13094	Aug 10	5	3	3	1.00
13270	Aug 10	5	29	29	3.00
13193	Aug 10	3	22	0	3.00
13651	Oct 10	4	92	92	2.50
13702	Oct 10	4	36	36	1.00
14935	Jan 11	2.75	20	0	0.25
14958	Jan 11	5.75	5	3	3.00
15460	Mar 11	3	45	0	2.00
15462	Mar 11	2	50	0	1.25
15421	Mar 11	5	34	34	3.50

There were 11 overruns of planned and warned interruptions lasting between 3 and 6 hours. The number of properties affected by these overruns was

$$9 + 39 + 63 + 60 + 38 + 3 + 29 + 92 + 36 + 3 + 34 = 406$$

This number is small compared to the number of properties that experienced a planned and warned interruption of between 3 and 6 hours (17,522).

T2: L9 = 27,547
T2: L10 = 10,025
27,547 - 10,025 = **17,522**

NI Water reported in its AIR10 commentary that there were 5 overruns of planned and warned interruptions lasting between 3 and 6 hours. The number of properties affected by these overruns was 293.

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	
12451	Apr 10	6	104	104	0	0	0	All Omerbane DMA
12454	Apr 10	8	40	40	40	0	0	Dunloy High Level DMA
12458	Apr 10	36.75	72	72	72	20	11	Monocloyh SR
12462	Apr 10	15.25	9	9	9	9	0	
12192	Apr 10	3	4	0	0	0	0	Raw Pumps, Keeran, Irvinestown. Pumps off.
12193	Apr 10	2.5	2	0	0	0	0	Mountdrum Pumps, Lisbellaw. Electric was off to pump.
12876	Jun 10	25	4	4	4	4	2	The pump at Mountdrum went off due to power cut. (Mountdrum pumps are not on Telemetry)
13029	Jul 10	1.25	4	0	0	0	0	Sixmilecross. Pump overload.
13032	Jul 10	7.5	100	20	2	0	0	Radergan DMA and Altcloghfin Booster. NIE power failure caused system to drain. System had to be repressurised.
13176	Aug 10	3	5	0	0	0	0	Ashandarray, Corranry, Rosslea. Ashandarray pumps off.
13174	Aug 10	1.5	11	0	0	0	0	Boho pumps off.
13175	Aug 10	1.5	2	0	0	0	0	Knockmore pumps off.
13436	Sep 10	4	10	2	0	0	0	Pumps off at Gortnalee Reservoir.
13504	Sep 10	3.5	9	9	0	0	0	Power failure at pumps.
13801	Oct 10	2.5	10	0	0	0	0	
13790	Oct 10	4	15	15	0	0	0	Pump off at Tonell.
13804	Nov 10	4.5	26	26	0	0	0	
14220	Dec 10	3	11	0	0	0	0	Tullyrossmearn Belcoo. Pumps off.
14317	Dec 10	3	16	0	0	0	0	Tullyrossmearn pumps off.
14604	Dec 10	5	16	16	0	0	0	Power off at Tullyrossmearn Booster.
14484	Dec 10	40	549	549	549	549	549	Inisclan DMA. Fault at Macroy Treatment Plant. Reservoir went empty.
14650	Dec 10	3.5	19	19	0	0	0	

The table provides a summary of the 22 unplanned interruptions caused by electricity supply failures in 2010/11. Interrupt Nos. 12451, 12454, 12458 and 12462 occurred on 1 and 2 April and relate to the heavy snow at the end of March 2010 and the resultant power failures which followed. Interrupt Nos. 14317, 14484 and 14650 relate to the Freeze/Thaw events of December.

The most significant incident occurred in December during the late Freeze/Thaw when a fault at Macrory Treatment Plant caused a reservoir to go to empty and resulted in a loss of supply to 549 properties for 40 hours.

Combined impact of electricity supply failures on annual outturns (excluding impact of early and late December Freeze/Thaws)

	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs
Numbers of Properties Affected by Electricity Supply Failures	317 (225)	127 (121)	33 (29)	13 (11)
Numbers of Properties Affected by Unplanned Interruptions	47,454	12,409	3,997	1,846
Percentage Impact	0.67% (0.47%)	1.02% (0.98%)	0.83% (0.73%)	0.70% (0.60%)

Figures relating to heavy snow at end of March and resultant power failures are in brackets

The impact of the electricity supply failures was greatest on the >6hr outturn, accounting for 1.02% of the total number of properties affected by unplanned interruptions (excluding impact of early and late December Freeze/Thaws).

Combined impact of electricity supply failures on KPI target compliance (including impact of early and late December Freeze/Thaws)

	> 6 Hrs	> 12 Hrs	> 24 Hrs
Percentage of Connected Properties Affected by Electricity Supply Failures	0.084% (0.015%)	0.072% (0.004%)	0.070% (0.0014%)
KPI Target	1.00%	0.22%	0.01%
Percentage of Annual Target	8.40% (1.50%)	32.73% (1.82%)	700% (14%)

Figures relating to heavy snow at end of March and resultant power failures are in brackets

The impact of the electricity supply failures was greatest on >24hr KPI target compliance, amounting to 700% of the annual target. The removal of properties affected by unplanned interruptions caused by electricity supply failures and the early and late December Freeze/Thaws does not alter the fact that NI Water would have failed to meet its >6hr, >12hr and >24hr KPI targets.

Due to the nature of the interruptions occurring at the end of March 2010, supplies were not restored to some properties until after the 2010/11 reporting period had commenced. NI Water included these interruptions in the reporting of its figures for 2009/10. This is consistent with the policy normally adopted by the Company for the reporting of interruptions spanning two months where the interruption is reported under the month of commencement.

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

The following table provides a summary of 35 supply interruption incidents during 2010/11 for which Upward Reports were generated. *For full details of all these incidents, please refer to the Upward Reports.*

Ref	Interrupt No.	Date of Incident	Cause of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Category
001	12274	19/04/2010	Burst Trunk Main to Derrylin/Doon Area, Enniskillen	5.5	6	6	0	0	0	3
002	12372	26/04/2010	Burst 15" Trunk Main from Foffany WTW	1	30	0	0	0	0	3
003	12356	30/04 – 01/05/2010	Burst 450mm Trunk Main, Caugh Hill WTW, Dungiven	24.25	36	36	36	6	6	3
004	12665	22/05/2010	Foffany WTW, Loss of Supply to Small Number of Properties in Mayobridge, Hilltown & Castlewellan	2.5	80	0	0	0	0	3
	12666	22/05/2010		2.5	4	0	0	0	0	
	12668	22/05/2010		4	445	445	0	0	0	
	12669	22/05/2010		7	16	16	16	0	0	
	12670	22 & 23/05/2010		22	1	1	1	1	0	
005	12895	23/06/2010	Burst Main, Sconce SR	11.75	20	20	20	0	0	3
006	12917	24/06/2010	Conlig HLSR	2	762	0	0	0	0	3
007	12918	25/06/2010	Burst Main, [REDACTED] Ballygowan	8	1	1	1	0	0	2 downgraded to 3
	12919	25/06/2010		6	47	47	0	0	0	
	12920	25/06/2010		6	3,088	3,088	0	0	0	
008	12914	03/07/2010	Burst Main, [REDACTED] Magherafelt	11.25	84	84	84	0	0	3
009	13154	05 & 06/07/2010	Burst 18" Trunk Main, Moys SR Outlet	7	40	40	7	0	0	3
010	13149	07 & 08/07/2010	Burst Main, [REDACTED] Ballynahinch	10	370	370	370	0	0	3

Ref	Interrupt No.	Date of Incident	Cause of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Category
011	13095	18/07/2010	Altnahinch Supply Zone	5	625	625	0	0	0	3
012	13123	23/07/2010	Burst Main, Greencastle	11.5	41	41	41	0	0	3
013	13042	23/07/2010	Burst Main, ██████████ Belfast	9.5	250	250	250	0	0	3
014	13116	30/07/2010	Burst Main, ██████████ Belfast	16.5	16	16	16	16	0	3
015	13353	07/09/2010	Burst Main, ██████████ Ballyclare	10.5	18	18	18	0	0	3
016	13431	10 & 11/09/2010	Loughan Hill SR	26.5	80	65	15	12	2	3
017	13759	19/10/2010	Burst Main, ██████████ Donaghadee	6	17	17	0	0	0	3
018	13735	27/10/2010	Burst Main, ██████████ Toome	7	78	78	78	0	0	3
019	14617	03/12/2010	Burst Main, Glenlough SR Outlet	1	200	0	0	0	0	3
020	Too numerous to list	08/12/2010 to 12/12/2010	Early December Freeze/Thaw	Please refer to Composite Interruption Data File for full listing of these interruptions						2
021	Too numerous to list	21/12/2010 to 06/01/2011	Late December Freeze/Thaw	Please refer to Composite Interruption Data File for full listing of these interruptions						1
022	14552	20/12/2011	Burst Main, ██████████ Bushmills	11.5	29	29	29	0	0	3
023	14861	13/01/2011	Burst Main, ██████████ Saintfield	2.5	118	0	0	0	0	3
024	E&P057	25/01/2011	Burst Main, Crumlin	8	2,130	2,130	2,130	0	0	3
025	15103	04/02/2011	Burst Main, Dungoran SR Outlet, Fintona	12.5	50	50	30	10	0	3
026	15114	02/02/2011	Burst Main, Crocknafeola	41	630	630	630	630	630	2
	15130	03/02/2011		19	767	767	767	767	0	
	15132	03/02/2011		58	1,050	1,050	1,050	1,050	1,050	
	15133	03/02/2011		1	3,230	0	0	0	0	
	15147	03/02/2011		16	663	663	663	663	0	
	15149	03/02/2011		32	101	101	101	101	101	
027	15115	06/02/2011	Burst Main, Kilkeel, Annalong &	12.25	630	630	630	4	0	2

Ref	Interrupt No.	Date of Incident	Cause of Incident	Duration	>0hrs	>3hrs	>6hrs	>12hrs	>24hrs	Category
	15142	06/02/2011	Ballymartin	14	95	95	95	95	0	
	15143	06/02/2011		25	27	27	27	27	27	
	15144	06/02/2011		21	103	103	103	103	0	
	15148	06/02/2011		4	198	198	0	0	0	
028	15116	07/02/2011	Burst Main, ██████████ Belfast	9	153	153	153	0	0	3
029	15186	13/02/2011	Burst Main, ██████████ Carrickfergus	6	40	40	0	0	0	3
030	15225	16/02/2011	Burst Main/Main Repair	7.5	24	24	24	0	0	3
031	15302	23/02/2011	Burst Main, Bushmills	10.5	29	29	29	0	0	3
032	15398	15/02/11	Burst Main, ██████████ Londonderry	8.5	34	34	34	0	0	3
033	15531	16/03/11	Burst Main, ██████████ Bushmills	6.75	25	25	25	0	0	3
034	15446	16/03/11	Burst Main, ██████████ Ballyclare	3.25	84	84	0	0	0	3
035	15454	17/03/11	Burst Main, ██████████ Carryduff	36	30	30	30	30	30	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	2010/11 Target		Monthly Target Allowance			
			Apr to Oct		Nov to Mar	
	%	Properties	%	Properties	%	Properties
>6hrs	1.00	8,089	0.059	476	0.118	951
>12hrs	0.22	1,750	0.013	103	0.025	205
>24hrs	0.01	80	0.00062	5	0.0011	9

The following table provides a summary of the incidents in 2010/11 where one or more of the monthly target allowances were exceeded. Numbers exceeding the target allowances are in bold text.

Interrupt. No.	Month	Duration (Hours)	Properties Affected					Cause	Target Allowance		
			> 0 Hrs	> 3 Hrs	> 6 Hrs	> 12 Hrs	> 24 Hrs		> 6 Hrs	> 12 Hrs	> 24 Hrs
12458	01/04/10	36.75	72	72	72	20	11	Electricity Supply Failure	476	103	5
12356	30/04/10	24.25	36	36	36	6	6	Burst Main, Dungiven	476	103	5
12567	22/05/11	11	500	500	500	0	0	Burst Main, [REDACTED] Larne	476	103	5
14566	08/12/11	25.5	13	13	13	13	13	Burst Main/Main Repair	951	205	9
14699	11/12/11	7.5	1,541	1,541	1,541	0	0	Other	951	205	9
14327	11/12/11	77.5	11	11	11	11	11	Other	951	205	9
14822	21/12/11	27.75	30	30	30	30	30	Burst Main/Main Repair	951	205	9
14821	23/12/11	84.5	56	56	56	56	56	Service Pipe Repair	951	205	9
14484	25/12/11	40	549	549	549	549	549	Electricity Supply Failure	951	205	9
14791	26/12/11	20	1,521	1,521	1,521	1,521	0	Burst Main/Main Repair	951	205	9
14690	28/12/11	42	63	63	63	63	63	Burst Main/Main Repair	951	205	9
14881	28/12/11	27	10	10	10	10	10	Burst Main/Main Repair	951	205	9
14610	29/12/11	61.75	300	300	300	300	300	Other	951	205	9
14785	29/12/11	20	920	920	920	920	0	Burst Main/Main Repair	951	205	9
E&P057	25/01/11	8	2,130	2,130	2,130	0	0	Burst Main, [REDACTED] Crumlin	951	205	9
15114	02/02/11	41	630	630	630	630	630	Burst Main, [REDACTED] Kilkeel	951	205	9
15149	03/02/11	32	101	101	101	101	101	Burst Main, [REDACTED] Kilkeel	951	205	9
15147	03/02/11	16	663	663	663	663	0	Burst Main, [REDACTED] Kilkeel	951	205	9
15130	03/02/11	19	767	767	767	767	0	Burst Main, [REDACTED] Kilkeel	951	205	9
15132	03/02/11	58	1,050	1,050	1,050	1,050	1,050	Burst Main, [REDACTED] Kilkeel	951	205	9
15143	06/02/11	25	27	27	27	27	27	Burst Main, [REDACTED] Kilkeel	951	205	9

Apart from the interruptions caused by supply rotation and service reservoir drain-down during the Freeze/Thaw, there were 21 interruptions during the year where the numbers of affected properties exceeded one or more of the monthly target allowances.

All three target allowances were exceeded on one occasion. The >6hr and >12hr target allowances were also exceeded on one occasion. And the >12hr and >24hr target allowances were exceeded on three occasions.

The property counts for 5 incidents (2 relating to the Freeze/Thaw events and 1 relating to the Kilkeel incident) exceeded the >6hr monthly target allowance. The property counts for 8 incidents (4 relating to the late Freeze/Thaw and 4 relating to the Kilkeel incident) exceeded the >12hr target allowance. And the property counts for 14 incidents (8 relating to the Freeze/Thaw events and 4 relating to the Kilkeel incident) exceeded the >24hr target allowance.

The following table provides a summary of the months throughout 2010/11 when the total number of properties affected by unplanned interruptions significantly exceeded the monthly target allowance.

Month	Number of Properties Affected by Unplanned Interruptions						Explanation
	> 6 Hrs		> 12 Hrs		> 24 Hrs		
	Actual	Target	Actual	Target	Actual	Target	
Apr 10	663	476	94	103	17	5	Heavy snow & resultant power failures
May 10	573	476	11	103	1	5	██████████ Larne incident
Jul 10	715	476	59	103	0	5	Higher than average rainfall & resultant ground movement
Dec 10	8,221*	951	3,739*	205	1,049*	9	Early & Late December Freeze/Thaws
Jan 11	2,671*	951	17*	205	3*	9	██████████ Crumlin incident
Feb 11	4,546	951	3,462	205	1,808	9	██████████ Kilkeel incident

*Excludes impact of supply rotation and service reservoir drain-down

There were 6 months in the year when the total number of properties affected exceeded the >6hr monthly target allowance, 2 months when the total exceeded the >12hr monthly target allowance, and 3 months when the total exceeded the >24hr monthly target allowance.

Late December Freeze/Thaw (21 December to 6 January)

According to the Met Office, December 10 was an exceptionally cold month with mean temperatures over 5 °C below the 1971-2000 average. Provisionally it was the coldest calendar month for over 100 years, slightly colder than February 1947. There were some severe frosts, and the number of days with air frost was the highest in December in over 50 years. During the second half of the month, many places had sub-zero temperatures continuously for over seven days. During this period, new Northern Ireland records were set for low night minimum and low day maximum temperatures.

Interruptions caused by frozen service pipes due to severe weather

In 2009/10, NI Water estimated the number of properties affected by frozen service pipes during the Freeze/Thaw by taking the number of “no water” complaints logged on Ellipse and deducting numbers of duplicate records and records relating to operational difficulties such as bursts, empty reservoirs and non-functioning pumping equipment. The resultant figure was then apportioned between customer responsibility and company responsibility according to the results of a number of random excavations conducted.

In 2010/11, NI Water is not in a position to carry out a similar analysis. “No water” complaint data was obtained for the Company’s two Work Control Centres for the period 15 December to 25 December. The complaints were grouped according to DMA and where a DMA had 8 or more complaints, it was assumed that the cause was a burst main or distribution problem and the associated work orders were removed from the data. The remaining 2,578 complaints were assumed to relate to frozen service pipes and specifically, to frozen supply pipes. As the Company has not assumed responsibility for any interruptions relating to frozen service pipes, the reported outturns exclude all properties affected by such interruptions.

Interruptions caused by increased demand due to severe weather

This section of the commentary covers interruptions to supply initiated by company action following the General Directions for preserving services or mitigating the effects of emergency issued by the Minister for Regional Development in December 2010.

NI Water has treated **all** interruptions caused supply rotation as unplanned interruptions. The Company is aware that planned interruptions require each property to be given at least 48 hours warning in advance. Warnings were issued on the Company’s website in advance of the rota cuts but it is impossible to determine the number of customers who would have received adequate notification via this medium.

Interruptions to supply caused by supply rotation

Start Time Determination: The Start Time was taken to be the time at which a valve was closed to cut off supplies to a particular DMA.

Finish Time Determination: The Finish Time was taken to be the time at which the valve was opened to restore supplies to the DMA.

Facts and Assumptions: There were instances where properties experienced more than one interruption due to supply rotation. Every property within each affected DMA is assumed to have experienced the same duration of interruption, with cut off and restoration delays cancelling one another out. This determination process has enabled properties affected by supply rotation to be apportioned under the four designated time bands.

Impact: The impact of supply rotation was compounded by the fact that many properties experienced more than one such interruption. The greatest number of properties affected at any given time was 95,510 on 29 December. Numbers of affected properties as percentages of the outturns were as follows:

Time Band	Outturn	Supply Rotation	Percentage of Outturn
>3hr	529,448	442,767	83.6%
>6hr	476,289	431,049	90.5%
>12hr	214,274	181,140	84.5%
>24hr	40,959	24,441	59.7%

Interruptions to supply caused by service reservoir drain-down

Start Time Determination: The Start Time was taken to be 00:00 on the first day that properties were affected by a loss of supply in a particular supply zone.

Finish Time Determination: In the case of properties that were not affected on a second consecutive day, the Finish Time was taken to be 00:00 on the following day i.e. 24hrs after the Start Time. In the case of properties that were affected on consecutive days, the Finish Time was taken to be 00:00 on the first day that properties were no longer affected by a loss of supply.

Facts and Assumptions: There were instances where properties experienced more than one interruption due to service reservoir drain-down. There were also instances where the number of affected properties differed for consecutive days. If the number increased, the additional properties were treated separately and given a later Start Time. If the number decreased, the removed properties were treated separately and given an earlier Finish Time. As a result of this determination process, all properties affected by service reservoir drain-down are assumed to have experienced an interruption of at least 24 hours and therefore there is no difference in the numbers reported under the >3hr, >6hr and >12hr time bands.

Impact: The greatest number of properties affected by service reservoir drain-down at any given time was 18,358 on 29 December. Numbers of affected properties as percentages of the outturns were as follows:

Time Band	Outturn	SR Drain-down	Percentage of Outturn
>3hr	529,448	25,439	4.8%
>6hr	476,289	25,439	5.3%
>12hr	214,274	25,439	11.9%
>24hr	40,959	13,622	33.3%

Impact of Bursts Mains/Main Repairs (Early & Late December Freeze/Thaws)

There was a notable increase in the number of burst mains/main repairs during the early and late December Freeze/Thaws and numbers of affected properties rose significantly for all four time bands of unplanned interruption. To illustrate the complexity of the situation, the Company has analysed the impact on numbers of unplanned interruptions caused by burst mains/main repairs and numbers of properties affected by those incidents.

Unplanned Interruptions Due to Burst Mains/Main Repairs

Time Band	2010/11 Total	Early Freeze/Thaw		Late Freeze/Thaw	
>3hr	836	31	3.7%	131	15.7%
>6hr	172	9	5.2%	31	18.0%
>12hr	56	3	5.4%	15	26.8%
>24hr	17	1	5.9%	7	41.2%

Props Affected by Unplanned Interruptions Due to Burst Mains/Main Repairs

Time Band	2010/11 Total	Early Freeze/Thaw		Late Freeze/Thaw	
>3hr	44,666	1,474	3.3%	8,135	18.2%
>6hr	16,774	720	4.3%	4,133	24.6%
>12hr	6,727	134	2.0%	2,698	40.1%
>24hr	1,956	13	0.7%	117	6.0%

Other Major Incidents

Burst Main, [REDACTED] Kilkeel (Ref: Interrupt. Nos. 15114, 15115, 15130, 15132, 15142, 15143, 15144, 15147, 15148 & 15149)

Crocknafoela Outlet is a 500mm diameter trunk main on the [REDACTED] Kilkeel feeding Carginagh, Ballymageogh, Ballyveagh and Mill Road Service Reservoirs. During a planned interruption to repair a burst on the main in early February, problems were encountered when the repair equipment failed and replacement equipment had to be sourced. This delayed the repair and hence the restoration time. The first properties to be affected were those fed directly by Carginagh SR and those situated in the town of Kilkeel.

As the levels of Ballymageogh, Ballyveagh and Mill Road service reservoirs dropped, a wider area of properties became affected. The impact of this incident in terms of percentages of connected properties affected was 0.50% >6hrs, 0.43% >12hrs and 0.22% >24hrs.

Heavy Snow and Resultant Power Failures, Early April 2010

According to the Met Office, the last few days of March 10 saw gales, with heavy rain and snow across high ground. Monthly mean temperatures were

somewhat below the 1971-2000 normals. The number of days with air frost across Northern Ireland was the highest in March since 1979.

There was a notable increase in the numbers of properties affected by unplanned interruptions due to power failures at the start of April 10. The impact is discussed in the section of the commentary relating to properties affected by interruptions caused by loss of electrical supply.

Burst Main, [REDACTED] Larne (Ref: Interrupt. No. 12567)

In May, 500 properties experienced an interruption of 11 hours due to a burst main on the [REDACTED] Larne. The impact of this incident in terms of percentages of connected properties affected was 0.06% >6hrs and 0% >12hrs.

Burst Main, [REDACTED] Crumlin (Ref: Interrupt. No. E&P057)

In late January, 2,130 properties experienced an interruption of 8 hours due to a burst main on the [REDACTED] Crumlin. According to the upward report on this incident, a 200mm PVC watermain was split while attaching tapping saddle. The repair operation required a new length of DI pipework to replace the split pipe length and reconnection to the 200mm PVC main. The impact of this incident in terms of percentages of connected properties affected was 0.26% >6hrs and 0% >12hrs.

Higher than Average Rainfall, July 2010

According to the Met Office, July was a wet month with rainfall totals generally more than 175% of normal and over 200% in much of County Down. It was the fifth-wettest July over Northern Ireland in a 100-year series, slightly wetter than July 2009 and 2007.

There was a notable increase in the number of properties affected by unplanned interruptions due to burst mains in July 10. This would suggest an increase in ground movement following a period of increased rainfall.

	Number of Bursts >6hrs	Number of Properties Affected		
		>6hrs	>12hrs	>24hrs
Jun 10	9	250	97	4
Jul 10	15	626	47	0
Aug 10	7	238	18	0

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

In 2010/11, NI Water has assigned a confidence grade of "B3" to each line of Table 2 relating to DG3. This is because the same processes and procedures are used to capture and report the data throughout. It is also in keeping with the AIR09 Reporter's recommendation to use consistent accuracy bands. The only change from AIR10 has been the confidence grade assigned to Line 8: DG3 Properties Affected by Unplanned Supply Interruptions of More Than 24 Hours. In 2009/10, the Company assigned a confidence grade of "C4" to this line because the outturn was comprised of data of differing degrees of

reliability and accuracy and the less robust data for properties affected by frozen communication pipes represented the greater proportion of the figure.

Although the task of calculating outturns for AIR11 has been complicated by the requirement to include the numbers of properties affected by supply rotation and service reservoir drain-down, the Company is confident that its figures have remained within the accuracy band of previous years.

Considerations – Late December Freeze/Thaw

SR Drain-down: When assessing the most appropriate accuracy band for its outturns, NI Water has considered the impact of the inclusion of properties affected by SR drain-down where precise interruption start and end times were unavailable.

It is known that in some instances, properties were affected for more than 24 hours by SR drain-down. Therefore, the inaccuracy of the outturns should only reflect those instances where the duration was uncertain. In order to determine the numbers of properties affected for uncertain durations, the Company has excluded those properties affected for three or more consecutive days.

In its rationale used to determine the duration of interruptions caused by SR drain-down, the Company made two basic assumptions:

1. Properties affected for two or more consecutive days experienced an interruption of more than 24 hours, and
2. Properties affected for only one day experienced an interruption of 24 hours or less.

Whilst the Company believes this rationale to have been the most fair and logical given the limitations of the data, it would be unreasonable to assume that the correct duration had been assigned to every property.

In recognition of these issues, the Company has investigated the impact of a 25% inaccuracy in the assignation of durations and can conclude that the impact would not be sufficient to warrant a drop in the accuracy of the outturns. The real inaccuracy of the durations is likely to have been less than 25%.

Time Band	Total Properties Affected by SR Drain-Down	Total Properties Less Those Affected for 3 or More Consecutive Days	Outturn	Impact of 25% Inaccuracy on Outturn	Accuracy Band
>3hrs	25,439	21,639	529,448	1.0%	1-5% (2)
>6hrs	25,439	21,639	476,289	1.1%	1-5% (2)
>12hrs	25,439	21,639	214,274	2.5%	1-5% (2)
>24hrs	13,622	9,822	40,959	6.0%	5-10% (3)

The Company believes a drop in the reliability grading of the outturns would be inappropriate, given that the property counts were derived from the GIS in a process similar to the process normally used when large numbers of properties have been affected by an interruption to supply.

Supply Rotation: NI Water has considered the impact of the inclusion of properties affected by supply rotation on the assignation of its confidence grading. As precise interruption start and end times were available, it was not necessary to make any assumptions around the durations. Although it is acknowledged that not every property within a DMA boundary would have lost or regained supply at exactly the same time, any delays at the start or end of an interruption are assumed to have cancelled one another out. Property counts were derived from the GIS and although the numbers are substantial, they relate to precise geographical areas defined by the Company's distribution network and the GIS is a highly reliable data source.

Frozen Service Pipes: NI Water has considered the impact of its decision to exclude all properties affected by frozen service pipes on the assumption that the pipes were frozen on the customer side and not the company side. Even if 50% of the interruptions believed to have been caused by frozen supply pipes had in fact been caused by frozen communication pipes and had lasted more than 24 hours, the inaccuracy of the outturns would not be significant enough to warrant a drop in accuracy band.

Time Band	AIR11 Outturn	Properties Affected by Frozen Pipes	Impact of 50% Inaccuracy on Outturn	Accuracy Band
>3hrs	529,448	2,578	0.2%	0-1% (1)
>6hrs	476,289	2,578	0.3%	0-1% (1)
>12hrs	214,274	2,578	0.6%	0-1% (1)
>24hrs	40,959	2,578	3.1%	1-5% (2)

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 is derived, in its entirety, 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 already captured, the focus has been on interruptions lasting 5 hours or more.

- There are minor shortcomings. There may be some missing documentation in the form of missing address details. 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 be inaccurate and this may have resulted in property counts being assigned to the wrong time bands. Again, NI Water does not believe that these inaccuracies would exceed 10%. Throughout 20010/11, the Company has further improved the accuracy of its time band assignments for unplanned and third party interruptions by comparing the start and end times of 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 interruptions where the numbers of affected properties are fewer and any inaccuracies are likely to represent a larger proportion of the overall figures, the Company is confident of its selected grading.

The information associated with unplanned interruptions lasting more than 6 hours is less likely to be inaccurate because of the interest these interruptions generate and of their impact on KPI performance. It is unlikely that any incident affecting a significant number of properties or involving a longer than average restoration time would have been omitted from the DG3 Register in error or that the property counts and timings would have been reported inaccurately.

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

Consistency Checks

- The Customer Field Managers check the records in the source repository to ensure that all interruptions have been input for their areas.
- Extracted data is routinely checked for consistency with records in the source repository.
- Records in the source repository are closed to prevent further editing.
- Checks are carried out to ensure that no records have been inadvertently deleted or duplicated during the transfer of data between spreadsheets.
- Records of unplanned interruptions and interruptions caused by third parties lasting 5 hours or more are compared with records of “no water” complaints and if necessary, the Start Times, End Times and property counts are amended to ensure consistency.
- Upward reports of supply interruptions are compared with records of unplanned interruptions and interruptions caused by third parties to ensure that the outturns include properties affected by major incidents. As upward

reports tend to relate to incidents involving large numbers of properties or lasting a long time, the chances of any such incidents being missed are greatly reduced.

- E&P checks the records to ensure there has been no duplication of rehab related interruptions by Networks Water.
- There is a signing off procedure involving three levels of management.

Sense Checks

- Customers experiencing planned and warned interruptions are provided with adequate advanced notification.
- Planned interruptions do not start before the planned start time.
- Planned interruptions ending after the planned end time are correctly classed as overruns.
- Property counts are provided for all relevant time bands.
- Interruptions caused by companies working for, or on behalf of, NI Water are classed as “unplanned”.
- Interruptions caused by electricity supply failures are classed as “unplanned”.
- All calculations involving the summation of property counts are correct.

Action Plan for Improvement

NI Water is currently unable to report confidence grades of A2, A3, B2 or better for its DG3 data. However, the Company has been making progress in its efforts to address this issue. During the last quarter of 2010/11 and as part of the Data Quality Initiative, a DG3 reporting solution feasibility study has been ongoing within NI Water. The fundamental aim of the study is to identify and validate options for improving the current reporting processes and procedures and hence, the confidence grade of the Company’s data.

The Company is currently considering a cost effective solution which would deliver improvements in the two most critical areas of data, the accuracy of property counts and the accuracy of start and end times by utilising and enhancing technology already available within the business. The solution would be process driven thus ensuring less scope for human error, a smooth work flow throughout and demonstrating a direct utilisation of the core systems involved. Better controls and precise, measurable records embedded in strong governance would ensure robust audit trails and improved accuracy and reporting.

It is anticipated that the development of a new system may commence in 2011/12, subject to available funding, the identification of a suitable technology solution and the success of a pilot exercise.

Reporter’s Recommendations on AIR10 – Progress Update

The Reporter recommended in his report on AIR10 - ‘Sample checks should be targeted to interruptions around the 6, 12, and 24 hour categories.’

In 2009/10, NI Water introduced a process aimed at improving the accuracy of its property count apportioning under the various time bands whereby the start times, end times and address details of DG3 records of unplanned and third party interruptions lasting longer than 6 hours were compared with records of

“no water” complaints derived from Rapid Xtra and amended where appropriate.

Throughout 2010/11, NI Water has increased the number of monthly sample checks carried out to include DG3/“no water” complaint comparisons for **all** unplanned and third party interruptions lasting **5 hours or more** (December excepting). The findings of this exercise were documented and periodically forwarded to the Customer Field Managers for their consideration. Where differences in the source information were identified, the CFMs provided either amendment instructions or an explanation supporting the original data.

Note: Due to a significant rise in the number of unplanned interruptions during the Freeze/Thaw, it was not possible for comparisons to be carried out for every interruption lasting 5 hours or more in December. Instead, checks were carried out on the twenty most significant interruptions based on property counts and duration.

Line 20 - Population (winter)

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 2010. Information was extracted from monthly bulletins published in the Research section of the NI Tourist Board website¹.

Month	Hotel Bed-Spaces Sold	Guesthouse & B&B Bed-Spaces Sold	Total Bed-Spaces Sold	Percentage
Jan-10	128,600	20,600	149,200	4.80%
Feb-10	182,100	16,600	198,700	6.39%
Mar-10	200,300	25,100	225,400	7.25%
Apr-10	209,300	37,800	247,100	7.95%
May-10	232,100	60,800	292,900	9.42%
Jun-10	234,400	59,400	293,800	9.45%
Jul-10	274,300	84,200	358,500	11.53%
Aug-10	282,400	79,800	362,200	11.65%
Sep-10	238,500	63,300	301,800	9.71%
Oct-10	228,500	47,600	276,100	8.88%
Nov-10	180,700	29,700	210,400	6.77%
Dec-10	164,600	27,400	192,000	6.18%
Total	2,555,800	552,300	3,108,100	100%

Assumption: The percentage bed-spaces sold during the winter was taken to be 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.

$$4.80\% + 6.39\% + 7.25\% + 7.95\% + 6.77\% + 6.18\% = 39.34\%$$

¹ www.nitb.com

- According to the “GB and Overseas Tourism Performance (January – September 2010)” (NITB website), the number of non-resident visitor nights for Northern Ireland was 5,704,000.
- The percentage bed-spaces sold (Jan-Sep 10) was calculated as follows:
 $4.80 + 6.39 + 7.25 + 7.95 + 9.42 + 9.45 + 11.53 + 11.65 + 9.71 = 78.15\%$
- The number of non-resident visitor nights for Northern Ireland (Jan-Dec 10) was estimated as follows:
 $(5,704,000 / 78.15) \times 100 = 7,296,922$
- By calculation, the estimated number of non-resident winter visitor nights
 $= (7,296,922 / 100) \times 39.34 = 2,870,782$
- By calculation, the estimated average number of non-resident winter visitors per night = $2,870,782 / (31 + 28 + 31 + 30 + 30 + 31) = 15,861$
- According to AIR11: Table 7: Line 17, the baseline resident population is **1,798.48 x 10³**.
- By calculation, the Population (winter) = $1,798,480 + 15,861 = 1,814,341$.

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

AIR09	AIR10	AIR11
1,800.32 x 10 ³	1,805.80 x 10 ³	1,814.34 x 10³

The Winter Population figure has increased from 1,805.80 x 10³ in AIR10 to 1,814.34 x 10³ in AIR11, an increase of 8.54 x 10³ (0.5%). This slight increase can be attributed to changes in the component figures that make up this figure. The baseline resident population has increased from 1,790.16 x 10³ to 1,798.48 x 10³, an increase of 8,320. And the estimated average number of non-resident winter visitors per night has increased from 15,640 to 15,861, an increase of 221.

The “GB and Overseas Tourism Performance (January – September 2010)” states that there was a 6% growth in European visitors year to date (January – September 2010).

Changes in Methodology

Up to and including AIR09, this calculation was based on an estimated annual number of non-resident visitor nights for Northern Ireland, published in NI Tourist Board’s “Preliminary Visitor Tourism Forecast”. According to the publication, the estimate was based on January to August data from both the

Northern Ireland Passenger Survey (NITB) and the Survey of Overseas Travellers (Fáilte Ireland). In 2009, NI Tourist Board published the actual number of non-resident visitor nights (Jan-Aug 09) in their “GB and Overseas Visitors to Northern Ireland Summary”.

In 2010, NI Tourist Board has published the actual number of non-resident visitor nights (Jan-Sep 10) in their “GB and Overseas Tourism Performance”. The annual number was estimated by NI Water on the basis that the percentage bed-spaces sold for hotel, guesthouse and bed and breakfast establishments (Jan-Sep 10) was 78.15%.

Confidence Grade

The annual average non-resident population is an estimate based on several sources of information:

1. The “GB and Overseas Tourism Performance (January – September 2010)” provides the actual number of non-resident visitor nights for Northern Ireland but only for the first 9 months of 2010. The number is based on surveys conducted by both NITB and Fáilte Ireland. An annual equivalent is only obtainable through extrapolation.
2. The Hotel and Guesthouse/B&B Occupancy Reports provide the numbers of bed-spaces sold. However, the numbers are based on the extrapolation of data for a representative sample 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.

The “2” has been assigned because even if all visits occurred in the winter, the difference in the calculated winter population would only be 24,453 properties (+1.35%). (see calculation below)

$$\begin{aligned}
 &7,296,922 / (31 + 28 + 31 + 30 + 30 + 31) = 40,314 \\
 &1,798,480 + 40,314 = 1,838,794 \\
 &1,838,794 - 1,814,341 = 24,453 \\
 &(24,453 / 1,814,341) \times 100 = 1.35\%
 \end{aligned}$$

Lines 21 - 23 - DG4 Restrictions on Use of Water

Drought orders are not applicable in N.I.

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

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

Northern Ireland Water does not operate a sprinkler license system.

Outturns and Confidence Grades

There were no hosepipe restrictions, drought orders or sprinkler/unattended hosepipe restrictions in 2010/11 and therefore, the percentage population experiencing DG4 Restrictions on Use of Water is 0.0% for Lines 21, 22 and 23.

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

Other Restrictions

It should be noted that restrictions were imposed during the reporting period which do not qualify for reporting under Lines 21, 22 and 23 but which do qualify for discussion in the Company Commentary. These restrictions relate to supply rotation during the late December Freeze/Thaw (21 Dec to 6 Jan). The onset of the thaw on 27 December resulted in much water being lost through leaking service pipes and burst mains. Supplies were rotated in many parts of the province to allow service reservoir levels to recover. The properties affected by these cuts are included in NI Water’s outturns for DG3 Properties Affected by Unplanned Supply Interruptions. (See *Company Commentary on Table 2: Lines 5 to 19*)

The following table provides a summary of the numbers of properties affected by supply rotation in the east and west of the province.

Properties Affected by Supply Rotation during Freeze/Thaw

Duration	East	West	Total
>3hrs	404,050	38,717	442,767
>6hrs	396,187	34,862	431,049
>12hrs	179,438	1,702	181,140
>24hrs	23,257	1,184	24,441

For a detailed breakdown of properties affected by DMA and date, please refer to the following files:

- Summary DMA Rezoning During Major Incident – East
- Summary DMA Rezoning During Major Incident – West

Future Reporting

Northern Ireland Water has yet to develop a series of revised DG4 procedures which will clarify the reporting requirements and definitions and the responsibilities of those involved in the reporting process.

NORTHERN IRELAND WATER LIMITED -ANNUAL INFORMATION RETURN

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

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	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
(i) OVERLOADED SEWERS											
2	Properties flooded in the year (overloaded sewers)	nr	0	195	D6	3	B4	6	B4	4	B3
3	Flooding incidents in the year (overloaded sewers)	nr	0	212	D6	3	B4	6	B4	10	B3
4	Flooding incidents (overloaded sewers attributed to severe weather)	nr	0	126	D6	0	B4	0	B4	4	B3
4a	Properties flooded in the year attributed to severe weather	nr	0	N/C		N/C		N/C		10	B3
5	Props. where flooding limited to uninhabited cellars only (o/loaded sewers)	nr	0	0	D6	0	DX	0	D6	0	B3
(ii) OTHER CAUSES											
6	Properties flooded in the year (other causes)	nr	0	366	D6	23	B4	5	B4	28	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
8	Flooding incidents (other causes - equipment failures)	nr	0	19	D6	4	B4	0	B4	4	B3
9	Flooding incidents (other causes - blockages)	nr	0	324	D6	16	B4	3	B4	14	B3
10	Flooding incidents (other causes - collapses)	nr	0	34	D6	3	B4	2	B4	10	B3
11	Props. where flooding limited to uninhabited cellars only (other causes)	nr	0	0	D6	0	DX	0	D6	6	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
13	1 in 10 register at end of year	nr	0	0	DX	745	D6	704	D6	3	B4
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
15	1 in 20 register at end of year	nr	0	0		0	DX	0	DX	211	B4
15a	Potential risk of property flooding identified requiring further investigation to assess at risk category.	nr	0					6	B2	8	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
17	Properties which have not flooded internally but suffer restricted toilet use (RTU)	nr	0			N/C		350	C4	0	B3
(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
23	Removed because of better information	nr	0	N/C		N/C		N/C		705	B4
24	Added because of better information (actually flooded)	nr	0							9	B4
25	Added because of better information (modelled)	nr	0							0	A1
26	Average capex cost of permanent solutions to 1 in 10 & 2 in 10 DG5 problems	£000/prop	1							0.0	B4
(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
31	Removed because of better information (1 in 20)	nr	0	N/C		N/C		N/C		0	B4
32	Added because of better information (actually flooded - 1 in 20)	nr	0							215	B4
33	Added because of better information (modelled - 1 in 20)	nr	0							0	A1
34	Average capex cost of permanent solutions to 1 in 20 DG5 problems	£000/prop	1							219.9	B4

Table 3 – Key Outputs - Sewerage Service – Internal Flooding

Objective/Aim

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

The DG5 register is in the process of being developed and during the course of the development it has been necessary to run a 2 tier approach for the determination on internal flooding incidents namely Historical Data and 'Live Data' i.e. data captured for the reporting year of 2010/2011.

New Internal Flooding Process

In line with the regulators instructions, an end to end review of the internal flooding process has been carried out. This process has been tested in the last reporting year and has gone live since April 2011. The new process will ensure a robust investigation is carried out for all internal flooding reports. An expert panel (the DG5 Panel) will examine the evidence for each incident and govern the addition of properties to and removal of properties from the register.

The register will no longer be held as an MS Excel spreadsheet but has been transferred to an Oracle database represented on the Corporate Asset Register as GIS layer on CARtomap. Although the Internal Flooding process is now in place, the process itself continues to be refined. It is hoped that most of the AIR12 reporting for internal flooding will be produced by querying the Internal Flooding Oracle Database.

Cleansing of Historical Internal Flooding RecordsAs a result of an initial cleansing exercise, 742 suspected DG5 properties out of 2000+ historical records were confirmed as flooding incidents and were defaulted to the 1:20 register. Further work has been carried out on the remaining 742 records to accurately determine each individual flooding incident. 169 historical records for which no other cause has been identified now remain in the internal flooding register.

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.

In Year Repeat Flooding

One property experienced repeat internal flooding in this reporting year.

Properties added and removed in the reporting year

Properties were removed in the year were due to 'better information' mainly as the result of the cleansing of historical records. 4 properties were removed from the 1 in 20 register due to company action. 4 properties were added to the internal flooding registers which actually flooded in the year and 5

properties were added which flooded in previous years due to better information.

Mitigation

The company has carried out mitigation work in locations where no imminent Capital schemes are planned. This is done on a case by case basis and is instigated by the field managers who use their local knowledge to assess whether mitigating measures would be effective.

37 properties protected by mitigating measures have been added to the 1 in 20 internal flooding register. It is expected that further investigation of mitigation measures will allow the addition of further properties onto the flooding registers.

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 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.

Progress against profile

The Final determination stated that 'Investment in the sewerage network will address the risk of internal flooding at 200 domestic properties'. 4 domestic properties were removed from the register by company action over the period.

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 the report year 2010 – 2011 nine new properties which have suffered internal flooding due to hydraulic incapacity were added to the register. Four

of the properties suffered actual flooding in the reporting year and five properties flooded in previous years were added due to better information.

Unknown cause flooding incidents

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

Assumptions

For the purpose of AIR11, NIW has assumed that a single incident includes recorded complaints from the same property on the same day or within three days.

'3 days' was chosen on the basis that a noticeable volume of repeat calls tend to be received within three days of an incident occurring. There is then a much longer passing of time before calls are again received from the same locality, suggesting that the original incident has passed and that the calls relate to a different incident.

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

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

Line 1 - Number of domestic properties connected to sewerage system

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

It is NIW's intention to automate the production of this report via the DIAMOND database reporting tool over the forthcoming reporting year for use in AIR12. NIW would then expect the confidence grade for this table to improve.

Calculation Process - Lines 2 to 11

Data gathering and calculation is as described below in the Line- Specific Methodology Statements for Table 3: Lines 2 to 11.

Lines 2 to 11 - Annual Flooding Summary

Sources/Process

A download of internal sewer flooding records was obtained from the Ellipse system for the period April 10 to March 11 on a month by month basis.

The records were sorted firstly by Creation Date field, then by Street Name field, then by Property Number field, and finally by Town/City field.

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, Flooding Report Forms, Field Manager reports and contacting the Customers directly, are removed, the remaining properties were combined for a yearly total.

There were some significant changes compared to last report, this is due to better understanding of issues and better reporting standards..

Assumption

For the purpose of AIR11, NIW 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 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.

Lines 2, 3, 6, 8, 9 and 10 - Properties and flooding incidents

A count was then made on these records that represented one internal flooding complaint per unique property, meaning that properties affected by more than one incident were reported only once, as per the definition.

These properties were then sub-divided into the appropriate categories for lines 2, 3, 6, 8, 9 and 10 using the information gathered from the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports and contacting the Customers directly.

Line 4 & 4a - Flooding incidents

A sort was carried out on all addresses to eliminate properties with ‘flooding other causes’ as found from the investigations using the information gathered from the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports and contacting the Customers directly.

The remaining properties are those either flooded due to overloaded sewers or flooding due to overloaded sewers attributed to severe weather.

A Met office report was obtained for each of these lines to ascertain if the cause of the internal flooding was due to weather conditions.

As per the definition this line’s enumeration includes flooding incidents caused by severe storms which affect properties that are **not** at risk of flooding more frequently than once in twenty years therefore a check was made on historical records to determine this.

There were significant changes to this line, this is due to better Field and Contractor reports. New reporting documentation was introduced to correctly identify areas of issue.

Lines 5 and 11 - Flooding to uninhabited cellars

The Flooding Incident Report Form has now been amended to capture the required detail for flooding of cellars and NIW are now in a position to report on these lines for AIR11.

Line 5 no significant changes, Line 11 There where some significant changes compared to last report, this is due to better understanding of issues and better reporting standards.

Line 7 - Properties flooded more than once in the last 10 years

A count was then made on these records that represented one internal flooding complaint per unique property identified as caused by blockage, collapse or equipment failure.

These annual records were combined with the list of historical records stating cause of flooding to be blockage, collapse or equipment failure.

A sort on the date of incident field and address field gave the number of properties that have flooded more than once in the last 10 years due to other causes.

There where some significant changes compared to last report, this is due to better understanding of issues and better reporting standards.

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

Reporting Process Lines 12 - 34

Those properties found to be 'At Risk' from records reported this reporting year are combined with those properties found to be at risk from the Historical Records and assigned as follows

(i) Summary

1. The number of records assigned to the Internal 2 in 10 "At Risk" Register was counted to give the figure for Line 12.
2. The number of records assigned to the Internal 1 in 10 "At Risk" Register was counted to give the figure for Line 13.
3. The numbers of records assigned to the Internal 2 in 10 and 1 in 10 "At Risk" Registers were summated to give the figure for Line 14.
4. The number of records assigned to the Internal 1 in 20 "At Risk" Register was counted to give the figure for Line 15.
5. The register was examined to identify properties in the 2 in 10 and 1 in 10 categories which have not flooded in the past 10 years to give a figure for line 16.

(ii) Annual changes to the 1 in 10 and 2 in 10 registers

6. NI Water's Capital Project management Reporting (CPMR) Tool was queried to report DG5 problems addressed by projects completed in this reporting period. These problems were then checked manually against the DG5 register to identify which problems were internal to report on the number of properties removed from the 1 in 10 and 2 in 10 registers due to company action for line 22.
7. The number of records removed from the 1 in 10 and 2 in 10 registers because of better information was counted to give the figure for Line 23.

8. The number of records added to the 1 in 10 and 2 in 10 registers because of better information (Actually flooded) was counted to give the figure for Line 24.
9. The company does not add properties to the 1 in 10 and 2 in 10 registers because of better information (Modelled). Hence Zero is reported for line 25
10. The total cost of removing properties from the 1 in 10 and 2 in 10 registers due to company action was calculated. This total divided by the number of properties removed properties from the 1 in 10 and 2 in 10 registers due to company action to give the average cost of removing a property from the 1 in 10 and 2 in 10 registers due to company action for line 26.

(iii) Annual changes to the 1 in 20 register

11. NI Water's CPMR Tool was queried to report DG5 problems addressed by projects completed in this reporting period. These problems were then checked manually against the DG5 register to identify which problems were internal to report on the number of properties removed from the 1 in 20 register due to company action for line 30.
12. The number of records removed from the 1 in 20 register because of better information was counted to give the figure for Line 31.
13. The number of records added to the 1 in 20 register because of better information (Actually flooded) was counted to give the figure for Line 32.
14. The company does not add properties to the 1 in 20 register because of better information (Modelled). Hence Zero is reported for line 33
15. The total cost of removing properties from the 1 in 20 register due to company action was calculated. This total divided by the number of properties removed properties from the 1 in 20 registers due to company action to give the average cost of removing a property from the 1 in 20 register due to company action for line 34

Line 12 - 2 in 10 register at end of year

This line reports the number of properties which have been fully investigated and classified as at risk of flooding more than once in ten years. The change in numbers is as a result of the cleansing of historic flooding records.

Line 13 - 1 in 10 register at end of year

This line reports the number of properties which have been fully investigated and classified as at risk of flooding once in ten years. The Major change in numbers is as a result of the cleansing of historic flooding records and the reclassification to the 1 in 20 register of records previously defaulted to the 1 in 10 register.

Line 14 - Total 2 in 10 and 1 in 10 registers at end of year

This line reports the total of line 12 and 13 and is significantly different because of the reasons explained above.

Line 15 - 1 in 20 register at end of year

This line was reported as zero last year. However this year the line reports the number of properties which have been fully investigated as part of the

cleansing of historic data and the reclassification to the 1 in 20 register of records previously defaulted to the 1 in 10 register. 4 properties were removed due to company action in the year.

Line 15a Definition The number of properties identified as requiring further investigation to assess 'Flooding Register' category. These are the number of incidents being carried forward into the next reporting period.

Line 16 - Properties which have not flooded in the last 10 years

The register contains a small number of records which date back more than 10 years. We have reported on this small number of records and reflected the lack of information in the confidence grading BX. Confidence will improve as the internal flooding registers mature.

Line 22 - Removed by Company action (2 in 10 and 1 in 10 registers)

NI Water's Capital Project management Reporting (CPMR) Tool was queried to report DG5 problems addressed by projects completed in this reporting period. These problems were then checked manually against the DG5 register to identify which problems were internal. The report for this year revealed that all flooding problems addressed were in the 1 in 20 register or under investigation so no properties were removed from the 1 in 10 and 2 in 10 registers due to company action for line 22.

Line 23 - Removed because of better information (2 in 10 and 1 in 10 registers)

This year the line reports the number of properties which have been fully investigated and excluded as part of the cleansing of historic data and the records reclassified to 1 in 20 register which had previously been defaulted to the 1 in 10 register.

Lines 24 - Added because of better information (2 in 10 and 1 in 10 registers) actually flooded.

A procedure was set up to enable NIW staff to report known flooded properties via a Flooding Incident Report form because of the known weakness of gathering historical information and the fact that known flooded properties have been missed, purely because the incident was never reported to NIW. These properties were added to the new properties reported in the year and placed in the appropriate 'At Risk' register.

Line 25 - Added because of better information (2 in 10 and 1 in 10 registers) Modelling

The company does not add properties to the 1 in 10 and 2 in 10 registers based solely on evidence provided by a verified hydraulic model. Hence the figure for line 25 is Zero.

Line 26 - Average cost of permanent removals (2 in 10 and 1 in 10 registers)

As no properties were removed from the 1 in 10 & 2 in 10 registers due to company action the Average Capex cost of attributed to permanently removing problems from the registers was zero.

Line 30 - Removed by Company action (1 in 20 register)

NI Water's Capital Project management Reporting (CPMR) Tool was queried to report DG5 problems addressed by projects completed in this reporting period. These problems were then checked manually against the DG5 register to identify which problems were internal. The report for this year revealed that 4 flooding problems were addressed. A further 27 flooding problems were claimed to have been addressed at locations not on the register, these are currently under investigation.

Line 31 - Removed because of better information (1 in 20 Register)

As there were previously no properties recorded on the 1 in 20 register only additions were made this year.

Lines 32 - Added because of better information (1 in 20 Register) actually flooded.

A procedure was set up to enable NIW staff to report known flooded properties via a Flooding Incident Report form because of the known weakness of gathering historical information and the fact that known flooded properties have been missed, purely because the incident was never reported to NIW. These properties were added to the properties which were recategorised from the 1 in 10 register and placed in the appropriate 'At Risk' register.

Line 33 - Added because of better information (2 in 10 and 1 in 10 registers) Modelling

The company does not add properties to the 1 in 20 register based solely on evidence provided by a verified hydraulic model. Hence the figure for line 34 is Zero.

Line 34 - Average cost of permanent removals (2 in 10 and 1 in 10 registers)

NI Water's Capital Project management Reporting (CPMR) Tool was queried to report DG5 problems addressed by projects completed in this reporting period. These problems were then checked manually against the DG5 register to identify which problems were internal. The report for this year revealed that 4 flooding problems were addressed at an average cost of £219,862.5. A further 27 flooding problems were claimed to have been addressed at locations not on the register an average cost of £61,342, these are currently under investigation.

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

All data is lifted directly and 10% "Top Slice Audited" on orders sent to Meridian from reported internal flooding incidents and cross checked with the returned Flooding Incident Report Forms, Operation Staff 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, and 17 is B3 carrying on from last report Line 15a is B2. The reason for this is given in the Line Specific Methodology. NIW now, for each confirmed internal flooding, investigate adjacent properties. In addition the Flooding Incident Report Form has now been amended to

capture the required detail for flooding of cellars and NIW should be in a position to report on these lines for AIR11.

Confidence Grading for Table 3 lines 12 - 34

A considerable amount of work has been carried out in 'cleansing' the historic internal flooding records. In addition flooding incidents reported during the year have been subjected to a more rigorous investigative process. Therefore grading for lines 12 to 15 have been upgraded to B4. Due the reliance on a small amount of solely historic data which has been cleansed, line 16 which was not previously reported has been given a confidence grading of BX.

Lines 23, 24, 31 and 32 are graded B4 as properties that are added to and removed from the register now have to pass through a much more rigorous process than previously.

Lines 25 and 33 are graded A1 as properties that have not flooded, are not added to the register solely from hydraulic modelling.

Lines 22, 26, 30 and 34 are the result of sound reports from NI Water's CPMR Tool, hence these lines are graded B4.

Changes from last year

In line with the regulators request all historic records have been removed from the 1 in 10 and 2 in 10 registers and placed in the 1 in 20 register. Also the company has completed its cleansing exercise and have removed a considerable number of records to the excluded section of the register. These actions have resulted in dramatic changes in the numbers reported from last year.

The company has also begun reporting on lines which were not reported previously and also on new lines included for the first time in this years AIR.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

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

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	
A ANNUAL FLOODING SUMMARY											
(i) OVERLOADED SEWERS											
1	Areas flooded externally in the year (overloaded sewers)	nr	0	899	D6	1,792	D6	1,196	D6	0	B3
2	Curtilege flooding incidents in the year (overloaded sewers)	nr	0	733	D6	1,619	D6	1,160	D6	0	B3
3	Highway flooding incidents (overloaded sewers)	nr	0	194	D6	357	D6	299	D6	0	B3
4	Other flooding incidents (overloaded sewers)	nr	0	120	D6	244	D6	144	D6	0	B3
5	Total flooding incidents (overloaded sewers)	nr	0	1,047	D7	2,220	D6	1,603	D6	0	B3
6	External flooding incidents (overloaded sewers attributed to severe weather)	nr	0	458	D6	1,062	D6	575	D6	0	B3
6a	Areas flooded externally attributed to severe weather	nr	0							N/C	
(ii) OTHER CAUSES											
7	Areas flooded externally in the year (other causes)	nr	0	4,283	D6	7,968	D6	6,872	D6	1,314	B3
8	Areas which have flooded more than once in the last 10 years (other causes)	nr	0	1,723	D6	3,828	D6	5,861	D6	272	B3
9	Flooding incidents (other causes - equipment failure)	nr	0	173	D6	438	D6	318	D6	12	B3
10	Flooding incidents (other causes - blockages)	nr	0	4,300	D6	9,217	D6	7,323	D6	1,389	B3
11	Flooding incidents (other causes - collapses)	nr	0	210	D6	528	D6	401	D6	35	B3
B AREAS ON THE 1:10, 2:10, 1:20 AT RISK REGISTER											
(i) SUMMARY											
12	2 in 10 register at end of year	nr	0	7	DX	7	DX	7	DX	N/C	
13	1 in 10 register at end of year	nr	0	1	DX	1	DX	1	DX	N/C	
14	1 in 20 register at end of year	nr	0	0	DX	0	DX	0	DX	N/C	
15	Total on the 1:10, 2:10, 1:20 register at end of year	nr	0	8	DX	8	DX	8	DX	N/C	
15A	Potential risk of property flooding identified requiring further investigation to assess at risk category.							40,863	DX	N/C	
(ii) PROBLEM STATUS OF EXTERNAL AREAS ON THE 1:10, 2:10, 1:20 REGISTER											
16	Cost beneficial problems where risk is reduced temporary measures (mitigation)	nr	0								
17	Non cost beneficial problems where risk is reduced by temporary measures (mitigation)	nr	0								
18	Cost beneficial problems awaiting solution and problems which have not been appraised	nr	0								
19	Non cost beneficial problems which have not been solved by mitigation	nr	0								
(iii) ANNUAL CHANGES TO 1:10, 2:10, 1:20 REGISTER											
20	Removed by company action (external only)	nr	0	N/C		N/C		N/C		N/C	
21	Removed by company action (external linked)	nr	0	N/C		N/C		N/C		N/C	
22	Removed because of better information	nr	0	N/C		N/C		N/C		N/C	
23	Added because of better information (actually flooded)	nr	0							N/C	
24	Added because of better information (modelled)	nr	0							N/C	
25	Transferred from external to internal register	nr	0	N/C		N/C		N/C		N/C	

Table 3a, Key Outputs – Sewerage Service – External Flooding**Annual Flooding Summary****Lines 1 to 11****Calculation Process**

Data gathering and calculation is as described below in the Line- Specific Methodology Statements for Table 3a: Lines 1 to 11.

Lines 1 - 7 & 9 - 11 – Methodology Statement**Sources/Primary Process (see Process Flow Diagram (Part 1))**

1. A download of external sewer flooding records was obtained from the Ellipse system for the period April 10 to March 11 on a month by month basis. WWBU also receive information, via Flood Incident Reports (FIRs) from the contractor, of flooding incidents which originate as a blocked sewer but further develop into a flooding incident.
2. The flooding records data is transferred to an Excel spreadsheet for interrogation and sort filters are applied.
3. Records are sorted by date, property number, street name and town in that order.
4. Duplicate instances are removed (this includes repeat calls received within three days of an incident occurring)
5. Remaining records are representative of one external flooding complaint per unique external flooding incident (there may be internal flooding records relating to these same properties and these same incidents)
6. These are cross referenced and those duplicated in the internal flooding records are removed.
7. Remaining records are representative of one external flooding complaint per unique property per unique external flooding incident.
8. When we receive the FIRs from the contractor the above records are checked and if the incident hasn't already been entered it is then added to the spreadsheet for record purposes.

Assumption

For the purpose of AIR11, NIW 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.

Sources/Secondary Process (see Process Flow Diagram (Part 2))

1. Records representative of one external flooding complaint per unique property per unique external flooding incident were derived using the Primary Process previously described.

2. Wastewater Business Unit (WWBU) carries out further investigations to determine the cause of the flooding incident.
3. WWBU assess the information held on customer report, Flood Incident Report (FIR), along with photographic evidence and closure details provided by the contractor.
4. 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 interviews, field manager interviews and review of existing incident information.
5. 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 6).

Assumption

For the purpose of AIR11, NIW has assumed that a single incident includes recorded complaints from the same property, neighbouring properties and neighbouring streets 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.

Line 6a - Methodology Statement

At present this data is not collected by NIW this will be reported on for AIR12.

Line 8 - Methodology Statement

Sources

1. A download of external sewer flooding records was obtained from the Ellipse system for the period April 10 to March 11 on a month by month basis. WWBU also receive information, via Flood Incident Reports (FIRs) from the contractor, of flooding incidents which originate as a blocked sewer but further develop into a flooding incident. These are investigated manually through returned FIRs to ensure no Duplication.
2. The Ellipse/FIR records were combined and each confirmed incident of External flooding was entered onto a spread sheet to collate the number of areas flooded.

NOTE: At this stage of the process, it was necessary to go through the same process of elimination as described in the Line-Specific Methodology Statement for Table 3a: Lines 1 & 7. This was to ensure that properties flooded both internally and externally during the same flooding event were only recorded on the internal incident flooding summary.

Assumption

For the purpose of AIR11, NIW 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.

Sources/Secondary Process (see Process Flow Diagram (Part 2))

6. A Pivot table was used to establish areas of multiple flooding incidents during the year
7. Records are sorted by street name and actual completion date
8. The number of areas of multiple incidents are manually counted.
9. This is the number of areas flooded in the year.
10. The above process will continue on a rolling basis and the figure will be calculated manually.
11. These properties were then allocated to line 8.

Changes in Methodology over the Previous Year

There have been changes in the methodology from that as reported for AIR 10. The raw data is from the same source i.e. Ellipse Work Management System but the information being input to the system is more accurate as the call centre script has been further refined (as per regulator’s recommendation Nr.4 in 2010) to ensure a more logical flow of questions is asked to determine the nature, location and extent of the flooding being reported.

Figures are derived using the new Line- Specific Methodology Statements and calculation sheets. As per regulator’s recommendation Nr.8 in 2010, a new Flooding Incident Report (FIR) has been drafted for implementation by the sewer maintenance contractor (April 2011), this now requires the contractor to scan photographic evidence onto the actual FIR and to provide more detailed information for the business unit. The WWBU also carry out more detailed route cause analysis of the sewer flooding.

Confidence Grading

All data is lifted directly from reported external flooding incidents but further investigations are now carried out on these incidents and using better route cause analysis the confidence grade for all Annual Flooding Summary figures in Table 3a Lines 1,2,3,4,5,6,7,9,10 and 11 is B3, due to the nature of these investigations it is appropriate to allocate this grade.

During the AIR11 reporting period Line 6a (Areas flooded externally attributed to severe weather) was not collated (N/C); nor were any external incidents attributed to Overloaded sewers reported.

A confidence grade of B3 has also been given to the 2010/11 data for L8 as the company does not retain detailed records beyond the current period.

Future Reporting Line 6a

The data to populate line 6a has not been gathered by NIW in AIR 11 as we only received the new table with this line on 1/4/2011, this information will be reported on for AIR 12.

Reporting Line 8

The decision has been taken to develop an External Flooding register from this reporting year as we do not have accurate historical data to report reliable information.

Changes in Methodology over the Previous Year

There have been changes in the methodology from that as reported for AIR10. The raw data is from the same source i.e. Ellipse Work Management System but the information being input to the system is more accurate as the call centre script has been further refined (as per recommendation Nr.4) to ensure a more logical flow of questions is asked to determine the nature, location and extent of the flooding being reported. Figures are derived using the new Line- Specific Methodology Statements and calculation sheets. As per recommendation Nr.8 a new Flooding Incident Report (FIR) has been drafted for implementation by the sewer maintenance contractor (April 2011), who also provides more written and photographic evidence to NIW. The WWBU also carry out more detailed route cause analysis of the sewer flooding. NIW are now recording the number of areas as well as the number of incidents of External Flooding (other causes) to ensure an accurate External Flooding Register is developed.

Going Forward to Implement Reporter's Recommendations

Work will continue during the AIR12 reporting period to gather the required information to more accurately complete the lines in Table 3a. Meetings have been held with the Flooding Contractor on the supply of information that will fulfil our commitment. Together with this, a dedicated DG5 role being improved within the Wastewater Business Unit and a more active involvement by Asset management good progress should be made.

Areas on the 1:10, 2:10, 1:20 At Risk Register – Summary and Annual Changes**Lines 12 - 15a and 20 - 25**

In previous years NI Water's return of information for Areas at risk of external flooding was based on a process of determining external flooding records which was started in the last quarter of 2008. A very small number of records were determined before the exercise was halted to concentrate on the cleansing of internal flooding records. Due to the age and low confidence in these figures they have not been returned this year.

However NI Water is committed to working towards full reporting capability for both internal and external flooding incidents before the end of the PC10 period (year 2013). Management procedures, policies, systems, business

processes and business rules for holding and moving properties within the register categories will be developed.

As the company is in the early stages of developing the External Flooding Register we are unable to make a return of information for Table 3a lines 12–15a and lines 20 - 25.

NORTHERN IRELAND WATER - ANNUAL INFORMATION RETURN

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

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	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
2	Number dealt with within 5 working days	nr	0	50,464	B2	80,262	B3	97,271	B3	103,710	B3
3	Number dealt with in more than 10 working days	nr	0	1,497	B2	12	B3	59	B3	86	B3
4	DG6 Percentage dealt with within 5 working days	%	1	95.0	B2	98.6	B3	98.1	B3	98.9	B3
5	Percentage dealt with in more than 10 working days	%	1	2.8	B2	0.0	B3	0.1	B3	0.1	B3
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
7	Number of properties connected for water and sewerage services	nr	0	664,282	B3	662,629	A2	654,085	A2	659,237	A2
8	Number of properties connected for sewerage services only	nr	0	197	B3	38	A2	35	A2	27	A2

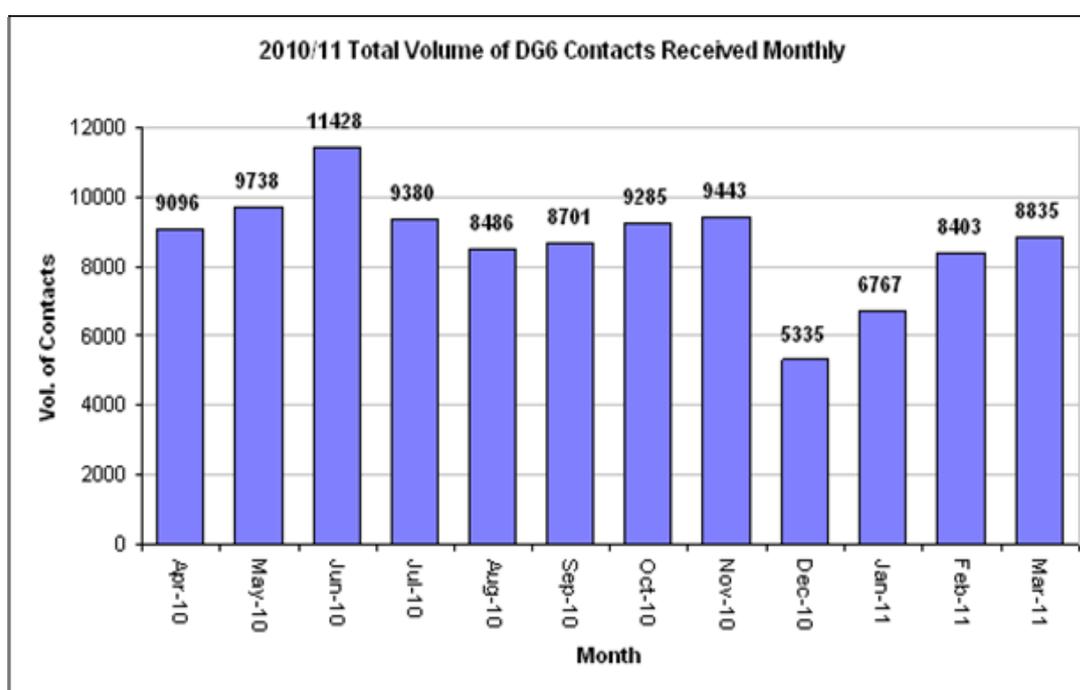
Table 4 – Key Outputs – Customer Service – 1 (Total)**Lines 1- 5 DG6 – Response to Billing Contacts**

This was the fourth year of non domestic billing by Northern Ireland Water (NIW). Following decision of the Executive, domestic charges continued to be deferred for 2010/11 charging year.

No changes, other than tariff changes were made to billing from April 2010.

Chart 1 below shows the monthly profile of DG6 contacts received during 2010/11.

Chart 1 Total volume of monthly DG6 contacts



The profile of billing contacts can't be compared against 2009/10 as, billing for all non domestic customers was deferred until mid July 2009 therefore the number of contacts was significantly less for April, May and June 2009 than same period 2010/11, however the high volume in June 2010 is comparable with June 2008/09 when the total contacts received were 10046.

Top Reasons for Customer Contact

Table 1 Top 5 Reasons for DG6 contacts

Charges Enquiry	2559
Balance Enquiry	841
Customer Details Change	601
Promise To Pay	579
Customer Moves	552

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

- Annual bills raised late April and sent throughout May
- 570 meters were reclassified and back dated bills sent end of March 10 early April 11

The major freeze/thaw incidents during December and January had a significant impact on our DG8 performance; meter readers were unable to locate or read meters due to the winter conditions and many were diverted to support the incident response teams over these periods. This in turn impacted on the number of DG6 contacts as customers were/or did not contact us for normal business during early December and over the Christmas period.

The source data for DG6 Table 4 (lines 1 to 5) is reported using the submitted methodology stated for DG6. The difference of 1101 between received and closed contacts is attributable to DG6 open contacts spanning year end.

Monthly reports for DG6 (received and closed) are run by Echo and independently validated by the NIW contract office. 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 telephone call explaining the reason for the bill is used as date and timestamp of the response. The recalculation is generated overnight; the file transferred and the recalculated bill is printed.

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.

Recording of DG6 Contacts from Customers with Multiple Accounts

NIW received clarification from the Regulator, towards the end of 2010, as to how contacts from customer with multiple accounts should be logged, so as not to over or understate the DG6 position.

NIW held a number of internal meetings to agree how this definition could be applied. In those discussions, NIW identified a number of scenarios where those contacts by customers with multiple accounts could be open to different interpretation and therefore risk inconsistent approach by agents logging the contact. However, NIW has agreed upon a readily identifiable scenario whereby the definition can be applied consistently.

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.

This definition was communicated to all agents and the approach was piloted during March 2011 to monitor and ensure all agents were logging contacts in a consistent manner. This approach will be carried forward from 1 April 2011.

Regarding the retrospective position, this isn't a model available to be applied with accuracy to the historic data to identify possible cases.

DG6 Project

There has been continuous focus to improve DG6 performance, reduce overall call volumes and improve the handling of billing contacts. A project was set up late June and the main objectives were to

- Address any long outstanding DG 6 items and visit requests
- Reduce DG6 Volumes by 20% through improved bill accuracy and customers understanding their bills;
- Reduce the use of holding letters
- Improve DG6 turnaround – Close calls at point of contact; Reduce visit request volumes, Improve meter query process;
- Improve reporting and enable clearer understanding of issues

Significant progress has been made against most of these objectives

Metrics indicate that significant improvements with regard to DG6 turnaround and visit requests have been achieved see table 2 for progress against baseline figure 2 July 2010.

Table 2 Key Metrics to Measure Success of Project

Open DG6s:	<i>Baseline (2nd July 10)</i>	<i>(30th March 11)</i>
Total Open DG6 Billing Contacts	2851	1650
Oldest outstanding open DG6	810 days	268 days
Open Visits Requests	2150	390

As of 12th May 2011, the oldest outstanding open DG6 contact is 165 days and the total number of open visit requests has reduced further to 341.

However, the overall target DG6 volume reduction (20%) may not be achieved by the targeted timeline.

This may be due process improvement implementations not having had time to have full impact, for example bill messaging and/or further process improvement work that is required, such as self serve implementation, bill format and web improvements. Volumes have continued while focus was on reducing the number of visits and oldest DG6 contacts. In addition the, meter reclassification (meters that have been surveyed, confirmed as non domestic and subsequently back billed) and VAT SIC code project have inevitably increased the number of contacts .

Currently an analysis is underway to look at the true root causes of our customer contacts, based on newly introduced codes, to establish if the target of a 20% reduction of DG6 contacts is appropriate against level of activity undertaken by the company for example bills, projects and annual mailings.

Initial findings indicate the ratio of 1:4 contacts per customer is in line with other utilities with a similar customer base. But further analysis will be undertaken to benchmark with other water companies.

Benefit Realisation

Part of the DG6 project was to identify benefits and the date by which they would be realised. The matrix below details the target and progress.

Target Benefit	Target Benefit Realisation Date	Comments
Reduce DG6 contacts by 20%. This equates to a reduction of 19,824 DG6 contacts based on 09/10 regulatory figures (99,122).	30 Sept 11	104897 received (83663 telephone, 21234 written as at 31/3/11). Further analysis also to be completed on the number of 'wanted' DG6 and 'unwanted' DG6. There is a high risk that this benefit shall not be achieved by the targeted timeline as further process improvement work is required, such as self serve implementation and bill format and web improvements.
Reduce site visits requests by 10-20%. This equates to a reduction of 1000 based on 09/10 regulatory figures (10000). This target is to be confirmed as the project progresses.	30 Sept 11	As at 6 April 11 open visits were 357. At the start of the project 2150 visit requests were open a reduction of 83%

Holding Letters

Holding replies are used when ongoing investigations or results of future activity delay resolution of a billing contact. For instance, a high consumption

query may require a field visit prior to resolution. Major focus has been given to this area from July 10 to reduce the number of customers receiving them.

The DG6 project was instigated in July to both improve the number of open queries and improve the use of holding letters the main aim was to reduce the number of holding replies issued and give customers a more realistic time frame. The project focused on the number of outstanding field queries which analysis showed was the main reason for holding letters being issued. The Utility Regulator and Consumer Counsel were consulted and agreement was obtained from these stakeholders to introduce a 60 day holding letter rather than the previous 15 day holding letter.

A triage approach was adopted by all of the departments who were needed to resolve a visit request. Close working on a daily basis has seen a significant improvement to the age and number of visits, see table 1 for results against baseline.

For quality purposes, the NIW Billing & Revenue team randomly selects 100 accounts for monthly bill accuracy checks. Results are collated and referred to the Customer Relations Centre for action.

The NIW policy team updates the Business Process Guidance Document at regular intervals, making it available to relevant staff.

As necessary, NIW Billing & Revenue key account managers carry out personal visits to customers which may result in a billing query. A tracking record is held centrally and updated by the account manager for each query raised. This is transferred to the Customer Relations Centre customer services team who treat this as an item of correspondence and log it as received. Feedback is provided on every query raised to ensure closure. In these instances holding letters are not raised as the responsibility for communication is with the NIW key account managers. However, the date/item of contact and date of closure are recorded and reported for DG6.

Reporter's AIR10 Recommendations

In AIR10 we were asked to address the known weaknesses of the system employed to report DG6/7. This refers to the anomaly raised by us whereby the AIR line methodology specifies 'closed over received' whereas internally we have always used 'closed over closed'. Throughout the year we have sought clarification on the correct reporting method from both the Reporter and NIAUR with the view expressed to us being that we should apply a consistent approach. Therefore, we have continued to report using closed over received for AIR11, as we did for AIR10.

For internal reporting purposes we've continued to use 'closed over closed' and this difference will only be visible if other reports are compared against AIR11.

Lines 6 - 8 – Connected Properties

Northern Ireland Water's (NIW) property data is provided from the RapidXtra Property Summary Report, provided by Echo and validated through the Contract Office.

Line 6 - Number of properties connected for water supply only

AIR10 figure – 144655

AIR11 figure - 147207

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

AIR10 figure – 654085

AIR11 figure – 659237

Line 8 - Number of properties connected for sewerage services only

AIR10 figure – 35

AIR11 figure – 27

As with other tables, such as 7 and 13, the recommendation from the Reporter following the AIR10 submission will also be considered as part of the 3rd party data source project. The Reporter recommended that as part of AIR11,

NIW review, for AIR11 submission, the revised NIHE Housing Condition Survey and check if inconsistencies in the figures for unconnected properties have been resolved.

The NIHE Housing Condition Survey is used by Leakage in the calculation of the Water Balance. Customer Systems has reviewed this report and agrees with the Reporter that it is a potentially valuable information source, although it should be considered along with the other data sources being considered as part of the 3rd party data source project to ensure that the most robust and accurate information is made available and used by NI Water in determining property status and addresses.

Additionally, there were some actions arising from the Interim Principal Statement and Draft Scheme of Charges 08/09 which have been considered to support Table 7. These are:

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.

These actions will be considered through a project under the DQ Programme. A project is being scoped to address both IPS actions in addition to the AIR 2010 Recommendation. It is expected that the scope will be defined by end June 2011, although ultimate closure dates will be dependent on the outcome of the scoping.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

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

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	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	Number dealt with within 10 working days	nr	0	2,394	B2	3,636	B4	3,449	B4	4,326	B2
3	Percentage dealt with within 10 working days	%	1	90.5	B2	97.6	B4	99.4	B4	100.0	A1
4	Number dealt with in more than 20 working days	nr	0	10	B2	16	B4	14	B4	4	B2
5	Percentage dealt with in more than 20 working days	%	1	0.4	B2	0.4	B4	0.4	B4	0.1	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
7	Metered accounts excluded from indicator	nr	0	1,126	A2	17,692	B2	17,447	B2	32,275	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
9	Company or customer readings (or both)	nr	0	55,517	A2	61,904	B2	62,825	B2	65,156	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
11	No bills received during the report year	nr	0	18,965	A2	578	B2	297	B2	246	A1
12	Unread by company for 2 years	nr	0	9,930	A2	895	B2	1,074	B2	1,048	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
14	All lines busy	nr	0	0	B2	0	A2	0	A2	699,566	A2
15	Total of calls not abandoned	nr	0	3,374	B2	3,591	A2	9,069	A2	300,722	A2
16	Call handling satisfaction	nr	2	4	B2	4	A2	5	A2	4.59	A1
17	Total telephone complaints	nr	0	22,636	B2	33,102	A2	47,860	A2	62,507	A2
D SPECIAL ASSISTANCE REGISTER											
18	Customers on the special assistance register	nr	0	N/C		N/C		546	A2	1,112	A2

Table 5 – Key Outputs – Customer Service - 2

DG7 Response to Written Complaints

A complaint is closed on the RapidXtra system once a full response is issued.

On occasions where a substantive holding response is sent to the customer, the contact is kept open on the RapidXtra system until all of the agreed actions have been completed. On these occasions the complaint is closed to the date of the substantive holding response.

If a repeat contact is received for the same subject, this will be handled as a new complaint. A closed complaint will not be reopened.

Methodology

The percentage of complaints closed within 10 working days is expressed as a percentage of the total volume of complaints received during the reporting period.

That is:

4326 (closed within 10 days, regardless of date of receipt) / 4327 (received in year) = 99.98%

Responses

Following recommendation, work was undertaken during 2010/11 to ensure that the correct closure dates were being used for those complaints where closure is backdated to the date of issue of the initial holding letter. A regular audit check is also in place from April 2011 to ensure continued compliance with the methodology.

Following recommendation, a clear audit trail is now in place to record any complaints excluded from the DG7 indicator. There were no exclusions reported for 2010/11.

Improvements

Triage Team/In-Source of Account Services

The Triage Team continued to operate within the Customer Services Delivery Directorate until 30/11/10 and the approach continued to prove successful.

Between 01st April 2010 and 31st November 2010:

- More than 1000 complaints dealt with through Triage approach;
- 52% closed at first point of contact;
- 88% fully closed within 10 working days without substantive holding responses having been issued.

Following the in-source of the Account Services department on 01/12/10, the Complaints & Executive Mail team undertook responsibility for handling the end-to-end complaints process.

The team continues to employ the principles of the “triage” approach and has successfully reduced the volume of open complaints.

Based on data extracted on 19th April 2011:

- 59 DG7 complaints were open;
- the oldest open DG7 complaint was 21 working days old;
- 2 complaints 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 complaints was 4.5 working days.

As the Triage approach to handling written complaints was fully operational throughout 2010/11, a confidence grade of B2 has been applied. This is an improved position from 2009/10 for which a confidence grade of B4 was reported.

CCNI Complaints Review

Following last year’s pilot, CCNI carried out a complaints review in March 2011. This review assessed a random sample of complaints dealt with during the year in addition to a sample of complaints handled during the major incident. CCNI submitted their draft report in April 2011 and it is currently in the review stage.

DG7 Quality Checking

NIW Contract Office carry out monthly sampling to quality check that complaints are being logged correctly within the Rapid system. The checks include validation that the complaint is a DG7, confirmation that the CMS codes are correct, that the date of closure is correct and that the response issued is substantive. Any areas of concern are then fed back to the relevant teams who provide a written response with agreed actions.

Logging Correspondence

Last year it was recognised that it was not acceptable to log complaints received after 14:00 as being received the following day. All complaints are now recorded as being received on the actual day of receipt, regardless of the time of receipt.

For email/fax contacts which can be sent at any time, guidelines state that the company should record the receipt date as the date it is delivered to the company even if this was not within normal operating hours with the following working day being recorded as Day 1. We have not been applying this approach during the year however have systems in place to ensure that it is adopted from the start of 2011/12.

Had this approach been in place during 2010/11, we have calculated that a further 20 DG7 contacts would have been reported as having been closed outside of 10 working days. This would have reduced the overall percentage closed within 10 working days to 99.51%, calculated as below:

4306 (closed within 10 days, regardless of date of receipt) /
4327 (received in year) = 99.51%

Reporter's AIR10 Recommendations

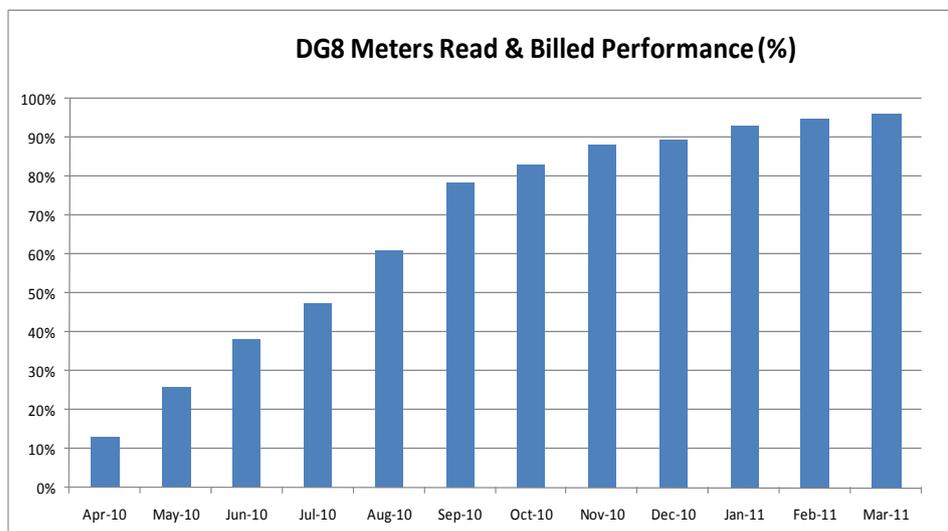
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For internal reporting purposes we've continued to use 'closed over closed' and this difference will only be visible if other reports are compared against AIR11.

Lines 6 - 12 - DG8 – Bills for metered customers

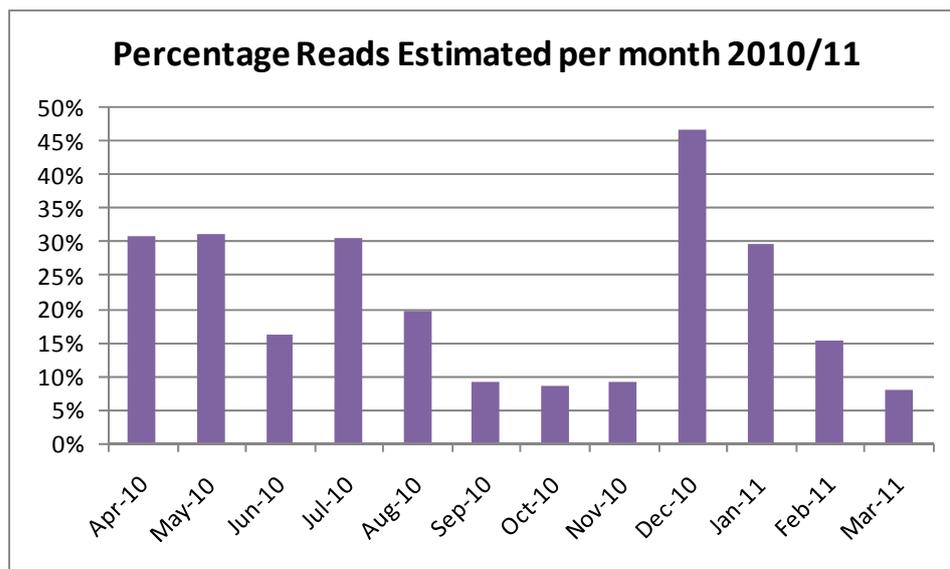
DG8 performance was 96.11% against a target of 95%, which is the first time in a number of years that DG8 has been achieved. A specific DG8 project commenced in July 10 to focus on achieving maximum read penetration to ensure the target was met. This was achieved against the back drop of the major freeze thaw incident during December 10 and January 11.

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



The graph 1 above illustrates the percentage increasing throughout the year as the graph is based on actual meter reads out of the total meter base for the year.

Graph 2: Percentage Reads Estimated per month 2010/11



The major freeze/thaw incident during December 10 and January 11 had a significant impact on our actual read performance. Meter readers were unable to locate or read meters due to the severe weather conditions and many were diverted to support the incident response teams.

However due to the significant efforts by the project and meter reading team the DG8 performance was still achieved. This was despite the percentage of estimated read increasing significantly for December (48%) and January (30%) circa 6,500 accounts as shown in chart 2 above.

The DG8 target for 2011/12 year has increased to a challenging 97.5%. Therefore we continue to review working practices and technology to further enhance performance by

- Focusing on optimising meter reading resource on billable meters.
- Targeting all Routes/Meters during the first 6 months inclusive of the difficult routes.
- The ongoing self service project will make it easier for customers to leave their own reads.

In addition, we will take this opportunity to promote customer self-reads via automated telephone and web based services. We will also continue to work with specific customer groups, such as UFU, to communicate with their members to explain how they should locate their meter, monitor their own consumption and check for water wastage as measured customers.

These initiatives may impact our DG8 performance initially as new processes are implemented, but can be offset by the expected reduction in the number of estimated reads, customer contacts and allow for more accurate reporting of consumption.

The number of metered accounts excluded from the indicator are:

- Charged on another basis

- Test meters
- Trade-effluent meters
- DRD or NIW meters
- Fire supplies
- Properties occupied less than six months
- Complex accounts – Including combination meters

Further to the Reporters recommendation from AIR2010 to "Undertake an exercise within AIR11 to reconcile complex accounts from one reporting year to another with regards to DG8" – NIW have considered various ways of extracting this information for 2010/11, however none have proved satisfactory. NIW will continue to explore suitable ways to satisfy this recommendation. The ongoing Data Quality work has identified a project which will examine Pipe size records and this may help to not only reconcile record but may require reclassification of some Combination meters. As of 31st March 2011 there are 1861 meters with a status of Combination meter.

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. 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 6-8.

Lines 13 - 17 - DG9 Telephone Contact

DG9 Introduction

During the reporting year a total of 1,040,555 calls were made to the advertised NI Water telephone numbers. Of this a total of 699,566 calls resulted in the caller getting an engaged tone. From the 340,989 calls that made it through to the NI Water switch, a total of 300,722 were answered and 40,267 were abandoned.

The above figures are a direct result of the unprecedented winter weather conditions in December and January, known within NI Water as the Freeze/Thaw event. The exceptional level of call volumes during the above incident had a major impact on service levels. On 28th December NI Water took substantially more call attempts in one day than it did in the whole of 2009/10.

The impact of this incident is reflected in performance against targets as outlined in the following sections. The table below summarises call volumes

reported, estimates for the Freeze/Thaw and adjustments excluding the Freeze/Thaw period.

DG9	Yearly Total	"Adjusted" (excl. Freeze/Thaw)	Freeze/Thaw Period
Calls Received	340,989	273,946	67,043
Lines Busy	699,566	2	699,564
Total calls made	1,040,555	273,948	766,607
Calls NOT abandoned	300,722	266,098	34,624
Calls abandoned	40,267	7,848	32,419
% NOT abandoned	88.19%	97.14%	51.64%
% NOT engaged	32.77%	100.00%	8.75%

(Freeze/Thaw period refers to 27 December 2010 – 6 January 2011)

All Lines Busy

Outside of the major incident there were 2 occurrences who received an engaged tone. NI Water has checked with our telecommunications provider and no explanation can be given. At the time the call volumes were low and the call centre was well populated with call agents.

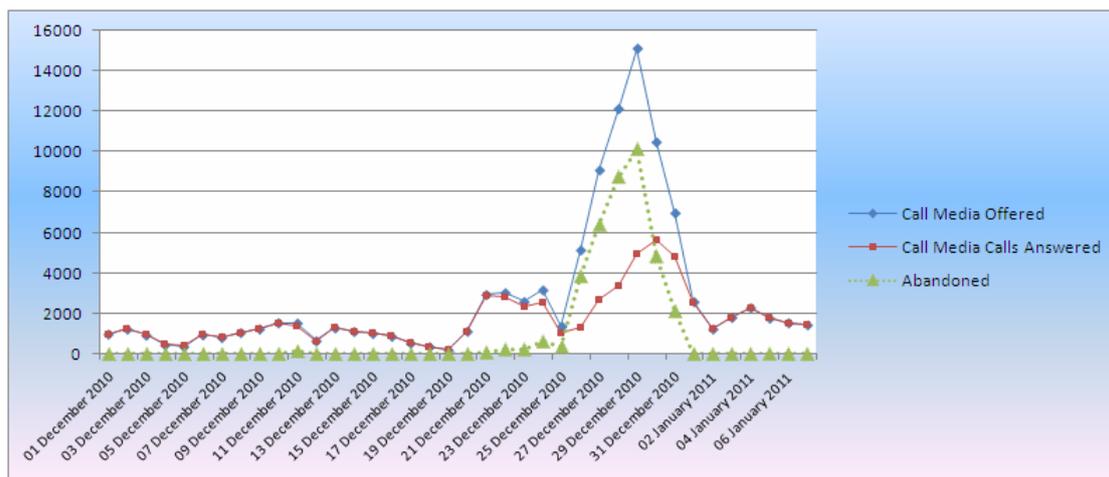
During the major incident a total of 699564 calls from customers received an engaged tone as a result of all lines being busy.

NI Water has taken significant steps since the major incident to improve our ability to handle increased call volumes during major incidents and to ensure customers do not received an engaged tone. Further work is still required to improve the overall level of service to customers and this will be reported back to the Regulator at regular intervals (as part of the NIAUR Action Plan governance arrangements).

Calls Abandoned

40,267 calls were abandoned during the reporting year. The Company's performance of 88.19% of calls not abandoned falls short of the 99% target set for the year. The failure to meet the expected target can be attributed in the main to Freeze/Thaw event in December and January. Over the Freeze/Thaw period the number of abandoned calls were 32419 and 699564 received an engaged tone. If the figures during the major incident are excluded the number of abandoned calls reduces to 7848 giving a performance of 97.14%.

On a typical day the Contact Centre would normally deal with around 1,300 calls. This spiked on several days during the incident, for example on Monday 27th December 9365 calls were received, Tuesday 28th December 13870 calls were received and on the 29th December 17699 calls were received. The table below shows the calls offered, answered and abandoned during the incident. Note that this graph does not reflect those calls that did not make it through to the NI Water switch (i.e. those that received an engaged tone).



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 5847 rejected calls made outside of published working hours recorded during the 2010/11 reporting period. The customer will receive 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. It is to be noted that the survey was not carried out in Q1 as there was discussions within the business to switch to SIM so as to be in line with the other water utilities in England and Wales. Final outcome was to keep with McCallum Layton while a better understanding of SIM was carried out.

McCallum Layton carried out the survey in Q2, Q3 & Q4 of this reporting year. The Company achieved an overall score of 4.59/5.0 for the reporting year. As all other water utilities now use SIM and Scottish water utilities do not publish CSAT results we are unable to provide ranking for the 2010/11 period.

Customers on the Special Assistance Register

The Company launched its Priority Services Service in February 2009. At the end of March 2010, 546 customers were on the Special Assistance Register. Customer Services now has a dedicated project to address the above issues. The project is looking to achieve the following key objectives:

- Increase the number of individual customers on the Customer Care Register to 2000 by end of December 2011 (this is a target set by CCNI).
- Develop a list of key organisations that look after or house vulnerable customers, e.g. hospitals, nursing homes etc.
- Develop call plans for both groups during an incident
- Develop the NI Water website to ensure it is consistent and accessible.
- Participate in the Vulnerable People Task Group setup by the Civil Contingencies Group NI.

Progress to date has been good. The key highlights are given below:

- There are currently 1112 customers on the customer care register.
- An update meeting with CCNI has taken place and they are happy with the progress being made to date. They have agreed to get more involved and to help drive this project forward.
- A follow-up meeting with RNID / BDA has taken place and next steps determined. The key steps are the introduction of an SMS service for this community and changes to the website. In addition NI Water and BDA are organising a user forum to allow deaf people to express their views on our performance during the recent major incident.
- NIE has agreed to promote our register out to their vulnerable customers. Letters and leaflets have been posted to their customers and we are beginning to see increased registration numbers as a result.
- Meetings with Fold Telecare have taken place to explore promotion of each others services to vulnerable customers. Fold Telecare currently look after all sheltered housing in Northern Ireland.
- NI Water is organising a Vulnerable Customer Forum on 24th June to promote the service to a wide range of stakeholder organisations.

NI Direct Flood Line

NI Direct Floodline 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. Given the integrated suite of systems within NI Water and the need to report Floodline jobs separately for regulatory purposes, all flooding incidents originating from NI Direct are prefix with 'FIL'. Flooding Incident Line logs the call and passes the jobs through to NI Water using similar systems to NI Water. From 1st April to 31st March 430 jobs were received by NI Water through this process.

Temporary Customer Contact Points

During the major Freeze/Thaw incident and given the extent of call volumes, NI Water set-up an arrangement with a local call centre provider called Teleperformance. The Teleperformance number was given to DARD as a dedicated line for farmers with livestock welfare issues. Teleperformance took calls from 31st December 2010 to 4th January 2011.

Number and Configuration of Incoming Lines and the Hours During Which They are Open

Office hours are defined as the hours which NI Water's principal advertised customer telephone contact 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
- **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
- **Debtline:** Monday to Friday - 08.00 to 17.00

IVR

NI Water has a good understanding of the telephony system including IVR. NI Water is introducing network IVR capacity and geographic based routing. This will be in place by the end of May. This will allow NI Water to divert calls to overflow call centres or other NI Water offices as required. NI Water now has a formal agreement in place with a 3rd party call centre provider (Teleperformance) for up to 50 additional agents within a defined SLA.

Sampling Methods

As per the Reporters recommendation NI Water re-introduced call listening in January 2011. The overall quality assurance process is however still being developed in conjunction with Echo. In addition NI Water is examining a potential upgrade to the call recording solution in place to make sampling and call listening a more efficient process.

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 NI Water, 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, NI Water 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.

Confidence Grades

With the exception of Call Handling Satisfaction, this data is derived directly from the Avaya telephony system through the Call Media reporting system it has been assigned a confidence grade of "A2", supplied by the Customer Billing and Contact centre from the Rapid system.

Call Handling Satisfaction has been given a confidence grade of A2 as it is conducted independently and the results are provided to NI Water (via its outsourced partner) from McCallum Leyton.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 5A KEY OUTPUTS

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

DESCRIPTION	UNITS	DP	1		2		3		4	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG
A TOTAL WRITTEN COMPLAINTS										
1 Total written complaints	nr	0	2,364	B2	3,727	B4	3,469	B4	4,327	B2
2 Number dealt with within 10 working days	nr	0	2,268	B2	3,636	B4	3,449	B4	4,326	B2
3 Number dealt with in more than 20 working days	nr	0	10	B2	16	B4	14	B4	4	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
5 Total written complaints about charging and billing issues escalated to second stage review	nr	0	N/C		36	B2	n/a		n/a	
(ii) Water Service										
6 Total written complaints about water service issues	nr	0	366		822	B2	622	B2	2,453	B2
7 Total written complaints about water service issues escalated to second stage review	nr	0	N/C		18	B2	n/a		n/a	
(iii) Sewerage Service										
8 Total written complaints about sewerage service issues	nr	0	771		1,024	B2	914	B2	312	B2
9 Total written complaints about sewerage service issues escalated to second stage review	nr	0	N/C		7	B2	n/a		n/a	
(iv) Metering										
10 Total written complaints about metering issues	nr	0	32		71	B2	92	B2	39	B2
11 Total written complaints about metering issues escalated to second stage review	nr	0	N/C		2	B2	n/a		n/a	
(v) Other activities										
12 Total written complaints about other service issues or activities	nr	0	375		233	B2	496	B2	709	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	

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

DG7 written complaints have been categorised based on the original open CMS code. Having completed a rationalisation of the CMS codes available on the system, we are moving towards using the CMS code applied on closure of the complaints for reporting purposes. The view is that this will improve accuracy of categorisation as the full investigation of the complaint will have been completed by that stage.

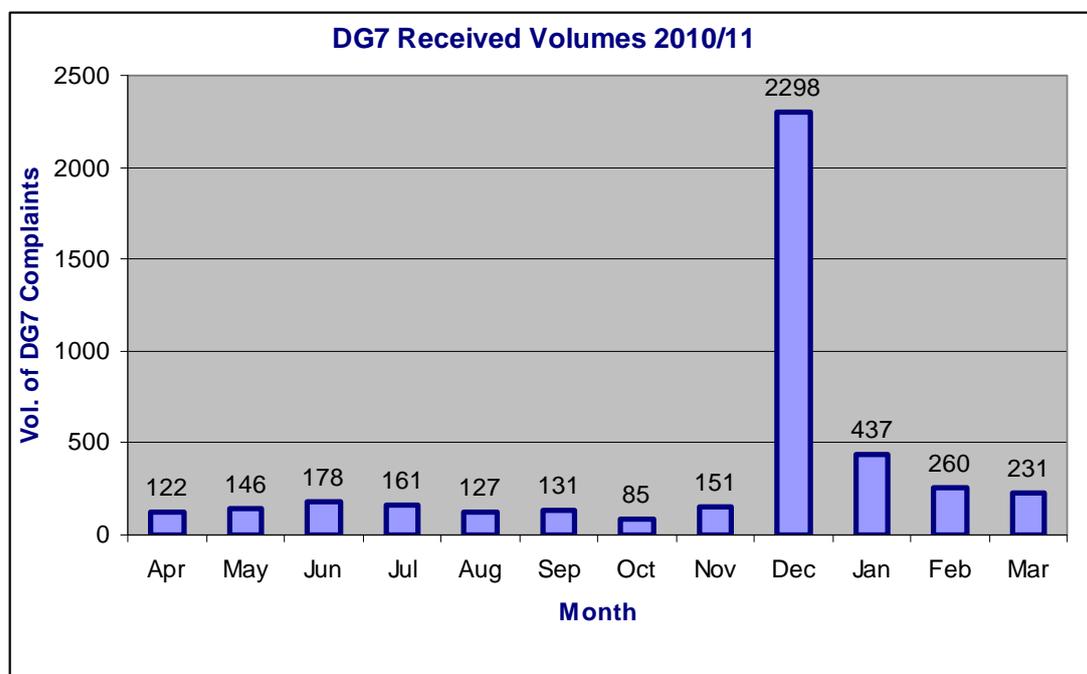
Operational Issues

The extreme freeze and sudden thaw during December and January resulted in widespread interruption to water supplies. During this period, the Customer Relations Centre was inundated with unprecedented call volumes. Customers were advised to turn to e-mail as an alternative means of communication. The spike in volumes during December and January can be directly attributed to the increased volumes of written operational complaints received by e-mail as a result of issues linked to this major incident.

An interruption to the water supply in the Killeel area in early February had an impact on the volume of operational complaints received.

DG7 Received Annual Profile and Explanation

The volume of DG7 complaints received each month is shown in the chart below.



The total number of complaints received during October reduced significantly. There is no obvious explanation for this decrease.

Following the freeze/thaw in December/January, volumes in February and March did not return to the volumes being received in the months prior to the incident. In addition to the aforementioned interruption to supply in Killeel during February, we continued to receive complaints linked to the freeze/thaw which would have contributed, in part, to this increase.

Reporter Recommendations

Following recommendation, work was undertaken during 2010/11 to introduce a protocol and methodology to allow the reporting of complaints at stage 2 in the DG7 handling process. We have not been applying this approach throughout the year however have systems in place to ensure that it is adopted from the start of 2011/12 for all written complaints. A regular audit check is also in place from April 2011 to ensure continued compliance.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 6A BAD DEBT
OUTSTANDING REVENUE AND BREAKDOWN OF CUSTOMER SERVICES OPERATING EXPENDITURE (TOTAL)

DESCRIPTION	UNITS	DP	1		2		3		4	
			REPORTING YEAR 2007-08		REPORTING YEAR 2008-09		REPORTING YEAR 2009-10	CG	REPORTING YEAR 2010-11	CG
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	
30 Number of measured non households with outstanding revenue < 48 months	nr	0			27160	20,254 A2		17,708	A2	
31 Revenue outstanding < 3 months (measured non households)	£m	3			5,913	9,556 A2		9,232	A2	
32 Number of measured non households with outstanding revenue < 3 months	nr	0			13002	12,754 A2		13,846	A2	
33 Revenue outstanding 3 - 12 months (measured non households)	£m	3			1,962	3,165 A2		1,564	A2	
34 Number of measured non households with outstanding revenue 3 - 12 months	nr	0			14158	7,500 A2		3,862	A2	
35 Revenue outstanding 12 - 24 months (measured non households)	£m	3				0,000 A1		0,000		
36 Number of measured non households with outstanding revenue 12 - 24 months	nr	0			0	0 A1		0		
37 Revenue outstanding 24 - 36 months (measured non households)	£m	3				0,000 A1		0,000		
38 Number of measured non households with outstanding revenue 24 - 36 months	nr	0				0 A1		0		
39 Revenue outstanding 36 - 48 months (measured non households)	£m	3				0,000 A1		0,000		
40 Number of measured non households with outstanding revenue 36 - 48 months	nr	0				0 A1		0		
41 Revenue outstanding > 48 months (measured non households)	£m	3				0,000 A1		0,000		
42 Number of measured non households with outstanding revenue > 48 months	nr	0				0 A1		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	
44 Number of unmeasured non households with outstanding revenue < 48 months	nr	0			5647	3,238 A2		1,304	A2	
45 Revenue outstanding <3 months (unmeasured non households)	£m	3			0.173	0.042 A2		0.040	A2	
46 Number of unmeasured non households with outstanding revenue < 3 months	nr	0			198	516 A2		219	A2	
47 Revenue outstanding 3 - 12 months (unmeasured non households)	£m	3			0.411	0.260 A2		0.123	A2	
48 Number of unmeasured non households with outstanding revenue 3 - 12 months	nr	0			5449	2,722 A2		1,085	A2	
49 Revenue outstanding 12-24 months (unmeasured non households)	£m	3				0,000 A1		0,000		
50 Number unmeasured non households with outstanding revenue 12 - 24 months	nr	0				0 A1		0		
51 Revenue outstanding 24-36 months (unmeasured non households)	£m	3				0,000 A1		0,000		
52 Number of unmeasured non households with outstanding revenue 24 - 36 months	nr	0				0 A1		0		
53 Revenue outstanding 36-48 months (unmeasured non households)	£m	3				0,000 A1		0,000		
54 Number of unmeasured non households with outstanding revenue 36 - 48 months	nr	0				0 A1		0		
55 Revenue outstanding >48 months (unmeasured non households)	£m	3				0,000 A1		0,000		
56 Number of unmeasured non households with outstanding revenue > 48 months	nr	0				0 A1		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
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
F CUSTOMER SERVICES OPERATING EXPENDITURE										
59 General customer services operating expenditure Total	£m	3			17.579	16.873		18.558	A2	6.667 A2
i Employment costs	£m	3						3.621	A2	3.168 A2
ii Hired and contracted costs	£m	3						13.474	A2	2.731 A2
iii Other	£m	3						1.376	A2	1.429 A2
iv Adjustments	£m	3						0.087	A2	-0.661 B3
60 Outstanding revenue collection operating expenditure (households)	£m	3			N/C	N/C		N/C		N/C
60a Outstanding revenue collection operating expenditure (non households)	£m	3								
61 Donations to charitable trusts assisting customers in debt (households)	£m	3			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
63 Total customer services operating expenditure	£m	3			17.579	16.873		18.558	A2	6.667 A2

Table 6a – Bad Debt

Overview

The company operates a partnership with an external service provider (Echo) for customer contact and billing. Customer Services 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 2011 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 £1.102m due to NIW from DRD for subsidy at 31 March 2011.

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 2011.

At 31 March 2011 the closing trade debtor balance was £10.796m. Trade Debtors decreased this year due to:

- A reduction of £8.0m in measured income.
- Continued improvements in cash collection.
- Legacy Debt write offs of £0.6m processed in the year.
- Increased bad debt provision of £1.1m.

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 £6.3m and is made up of the following:

- £2.9m for debt over 1 year
- £2.5m for debt 90 – 365 days
- £0.9m 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. £0.27m more than the detailed debtors listing provided by Echo. This was due to the following:

- Test meters to be billed £0.24m
- Referred bills (£0.1m)
- Non void vacant properties £0.1m
- Victoria Square £0.03m

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 2010/11 outstanding from measured non households for less than 48 months. Balance as at 31 March 2011 was £10.796m.

Row 30 – Number of Measured Non-Households with Outstanding Revenue < 48 months: The number of measured non households at the end of 2010/11, with revenue outstanding for less than 48 months. Total at 31 March 2011 was 17,708.

Row 31 – Revenue Outstanding < 3 months (Measured Non Households): The total amount of revenue at the end of 2010/11 that has been outstanding from measured non households for less than 3 months. Balance as at 31 March 2011 was £9.232m.

Row 32 – Number of Measured Non-Households with Outstanding Revenue < 3 months: The number of measured non households at end of 2010/11, with revenue outstanding for less than 3 months. As at 31 March 2011 this totalled 13,846.

Row 33 – Revenue Outstanding 3-12 months (Measured Non Households): The total amount of revenue at the end of 2010/11 that has been outstanding from measured non households for at least 3 months but less than 12 months. Balance as at 31 March 2011 was £1.564m.

Row 34 – Number of Measured Non-Households with Outstanding Revenue 3-12 months: The number of measured non households at end of 2010/11 with revenue that has been outstanding for at least 3 months but less than 12 months. At 31 March 2011 this totalled 3,862.

Row 35 – Total Revenue Outstanding 12-24 months (Measured Non Households): The total amount of revenue at the end of 2010/11 outstanding from measured non households for at least 12 months but less than 24 months.

Once the bad debt provision is applied there are no debtors greater than 12 months. Therefore at 31 March 2011 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 2011.

- At 31 March 2011 the closing trade debtor balance was £0.163m. (31 March 2010, £0.302m). Reason for the decrease is due to the continued improvements in cash collection.

The debtor balance reported figure is made up of unmeasured water and sewerage debtors less bad debt provision. The bad debt provision is £0.356m and is made up of the following:

- £0.199m for debt over 1 year
- £0.157m for debt 90 – 365 days
- £0.001m 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 2010/11 outstanding from unmeasured non households for less than 48 months. Balance at 31 March 2011 was £0.163m.

Row 44 – Numbers of Unmeasured Non-Households with Outstanding Revenue < 48 months: The number of unmeasured non households at the end of 2010/11 with revenue that has been outstanding for less than 48 months. Total at 31 March 2011 was 1,304.

Row 45 – Revenue Outstanding < 3 months - Unmeasured Non Households: The total amount of revenue at the end of 2010/11 outstanding from unmeasured non households for less than 3 months. Balance at 31 March 2011 was £0.040m.

Row 46 – Numbers of Unmeasured Non-Households with Outstanding Revenue < 3 months: The number of unmeasured non households at the end of 2010/1 with revenue outstanding for less than 3 months. Total at 31 March 2011 was 219.

Row 47 – Revenue Outstanding 3-12 months - Unmeasured Non Households: The total amount of revenue at the end of 2010/11 outstanding from unmeasured non households for at least 3 months but less than 12 months. Balance at 31 March 2011 was £0.123m.

Row 48 – Numbers of Unmeasured Non-Households with Outstanding Revenue 3-12 months: The number of unmeasured non households at end of 2010/11 with revenue outstanding for at least 3 months but less than 12 months. Total at 31 March 2011 was 1,085.

Row 49 – Revenue Outstanding 12-24 months - Unmeasured Non Households: The total amount of revenue at the end of 2010/11 outstanding from unmeasured non households for at least 12 months but less than 24 months.

Once the bad debt provision is applied there are no debtors greater than 12 months. Therefore at 31 March 2011 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 £1.6m (2009/10, £0.353m). The movement in the year is due to continued monthly write offs as a result of the aged debt project and £0.6m of write offs in relation to legacy debts.

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 £500	Senior Agent / Team Manager		
>£500 to £1000	Operations Manager		
>£1,000 to £5,000	Head of Service Delivery		
>£5,000 to £10,000		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	>£5m

* 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 2010/11 was £1.534m (2009/10, £0.340m). The increase in the year is due to £0.6m write offs in relation to the legacy debt, an additional year of debtors aging and the bad debt project.

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 2010/11 was £0.070m (2009/10, £0.013m).

Bad Debt provisioning

The standard methodology for calculating the bad debt provision is consistent with 2009/10 except as stated below. The company view this methodology as providing the best estimate of the provisioning required. NI Water's bad debt provision is calculated as follows:

	Age of debt	Provision
General provision		
Measured Water and Trade Effluent	> 365 days	100%
	181-365 days	65%
	151-180 days	35%
	121-150 days	20%
	0-120 days	2%
Repayment Plan	>151 days	25%
Unmeasured Water	> 365 days	100%
	181-365 days	45%
	151-180 days	35%
	121-150 days	20%
	0-120 days	2%
Repayment Plan	>151 days	25%
Specific provision		
Uncollectables	All	100%

In addition to the standard methodology above, NI Water applied 2 further adjustments to the year-end bad debt provision. These were:-

1. Increased Provision for Test Meter Debt.
2. Increased Provision in relation to outstanding debts from customers operating in sectors that are most at risk in the current economic climate.

A note is provided on each of these below.

Test Meter Provision

In 2010/11 a separate report was created that identified debt in relation to test meters billed. Based on historic collection patterns, it was decided that all test meter debt due less than 1 year should be provided for at 75%. All of this debt related to measured non-households and this approach resulted in an additional provision of £0.4m at 31 March 2011.

Industry Specific Additional Provision

The revised provisions for those industries considered to be at risk are shown below:-

Age of Debt	Standard Provision	Revised Provision
0-30	2%	5%
31-60	2%	5%
61-90	2%	15%
91-120	2%	35%
121-150	20%	50%
151-180	35%	75%
180-365	65%	90%

This approach resulted in an additional provision of £1.083m and it all related to measured non-household debt.

Bad Debt Provision Summary

The following is a summary of the bad debt provision at 31 March 2011 and 31 March 2010:

	2011	2010
	£m	£m
Measured water & sewerage	6.178	5.084
Unmeasured water & sewerage	0.356	0.382
Trade effluent	0.091	0.104
Total	6.625	5.570

Subsidy

NI Water received £245.702m subsidy in relation to household customers and at 31 March 2011 an amount for £0.898m was outstanding from DRD. The total subsidy in relation to household customers for the year ended 31 March 2011 was £246.6m.

NI Water received £14.795m subsidy in relation to non-household customers and at 31 March 2011 an amount of £0.037m was outstanding from DRD. The total subsidy for non-households for the year ended 31 March 2011 was £14.832m.

At 31 March 2011 £0.934m was due to NIW from DRD. £0.898m of this related to household subsidy and £0.037m related to non-household subsidy.

Row 59 - General customer services operating expenditure

The figures agree to the sum of line 13 in table 21 and line 12 in table 22.

The row 59 total of £6.667M in 2010/11 is a £11.9M decrease against the costs of £18.558M in AIR10. This arises for the following reasons:

Hired and Contracted (difference of £10.7M (80%)):

- In AIR10, £4.5M of the Customer Services costs related to a provision set aside for a commercial claim being made against NI Water. In September 2010, the claim was settled before going to court. This resulted in a £2.4M release of the provision, within Customer Service opex costs, in the 2010/11 year. Hence, the £4.5M no longer required and the £2.4M release lead to a £6.9M reduction, year on year.
- The costs in AIR10 contained 15 months of Echo Managed Services Ltd (Echo) gross service charges, going back to 1 January 2009. As 2010/11 had just the 12 months of gross service charges, this led to a reduction of £1.0M.
- Consultancy costs reduced by £2.1M due to the 2009/10 work on the Customer Billing Centre (CBC) not being required in 2010/11, the reduced Business Improvement programme within Customer Services in 2010/11, and the replacement of PwC staff substitutes by internal staff.
- Salary costs of £0.4M in AIR10 were re-allocated in 2010/11 to the Business Improvement team.
- There were no temporary staff in 2010/11, leading to a saving of £0.3M.
- There was a £0.3M saving in 2010/11 in the amount of Change Requests from Echo.

Adjustments (difference of £0.7M (-860%))

- The costs associated with meter reads and customer services has dropped by £0.7M, due to reduced septic tank expenditure and a difference in the allocation of payroll costs. The difference in the allocation of payroll costs has led to a confidence grading of B3 applied to the adjustments line. However, the confidence grade for line 59 overall remains at A2.

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)

This line has not been completed, in line with Ofwat requirements for water companies in England and Wales.

Row 61 - Donations to charitable trusts assisting customers in debt

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		
			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	
A PROPERTIES													
1	Household properties connected during the year	000	3	7.595		8.358	B3	4.457	B3	4.748	B2		
2	Non-household properties connected during the year	000	3	1.482		0.723	B3	0.272	B3	0.284	B2		
B BILLING													
3	Households billed unmeasured water	000	3	634.990		646.099	C3	654.625	C3	663.353	C2	671.269	C2
4	Households billed measured water (external meter)	000	3	30.398		0.000	C3	0.000	C3	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
6	Households billed water	000	3	665.388		646.099	C3	654.625	C3	663.353	C2	671.269	C2
7	Household properties (water supply area)	000	3	712.932		686.036	C3	693.005	C3	702.825	C2	711.727	C2
8	Non-households billed unmeasured water	000	3	31.341		30.519	C3	16.050	C3	13.648	B3	11.053	B3
9	Non-households billed measured water	000	3	42.823		78.416	C3	68.666	C3	68.713	B2	68.480	B2
10	Non-households billed water	000	3	74.164		108.935	C3	84.716	C3	82.361	B3	79.533	B3
11	Non-household properties (water supply area)	000	3	83.516		116.249	C3	102.636	C3	99.674	B3	115.554	B3
12	Void properties	000	3	56.896		49.698	C3	49.572	C3	51.290	B3	56.785	B3
C POPULATION													
13	Population - households billed unmeasured water	000	2	1637.01		1672.51	B3	1685.97	B3	1686.41	B2		
14	Population - households billed measured water	000	2	85.06		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		
16	Population - non-households billed measured water	000	2	18.36		95.93	B3	95.33	B3	103.66	B3		
17	Population - total	000	2	1748.53		1775.11	B2	1790.16	B2	1798.48	B2		

Table 7 – Water Properties & Population (Total)**Lines 1 - 12 - Properties and Billing****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 2011/12. 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 AIR11. 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.

The Recommendation from the Reporter following the AIR10 submission will also be considered as part of the 3rd party data source project. The Reporter recommended that as part of AIR11,

NIW review, for AIR11 submission, the revised NIHE Housing Condition Survey and check if inconsistencies in the figures for unconnected properties have been resolved.

The NIHE Housing Condition Survey is used by Leakage in the calculation of the Water Balance. Customer Systems has reviewed this report and agrees with the Reporter that it is a potentially valuable information source, although it should be considered along with the other data sources being considered as part of the 3rd party data source project to ensure that the most robust and accurate information is made available and used by NI Water in determining property status and addresses.

Additionally, there were some actions arising from the Interim Principal Statement and Draft Scheme of Charges 08/09 which have been considered to support Table 7. These are:

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.

These actions will be considered through a project under the DQ Programme. A project is being scoped to address both IPS actions in addition to the AIR 2010 Recommendation. It is expected that the scope will be defined by end June 2011, although ultimate closure dates will be dependent on the outcome of the scoping.

There has been further significant focus on customer numbers during 2010/11, primarily due to commitments within PC10/Final Determination submissions and NIW Undertakings. As a result, there have been considerable data shifts from AIR10, 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 14,600 in March 2010 to 12,600 in March 2011. 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 for both leakage/water balance calculation and tariff setting/charging.

The target for the conversion of 1000 properties from unmeasured to measured status was achieved for 2010/11. The resulting average estimated consumption was higher than expected, due mainly to the lower uptake of customers on assessed charges and the differences between those customers forecast to move from unmeasured to measured and those who actually did.

Under the Water & Sewerage Services (2006) Order, NI Water is required to install meters on all new household connections since April 2008. 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 latter has been a significant step forward during 2010/11, with property numbers now being available through an automatic system based report.

Data on population continues to be obtained from Northern Ireland Statistics and Research Agency (NISRA), adjusted for the summer months based on information received from Northern Ireland Tourist Board (NITB).

From the Rapid Property Summary there are deemed to be 622 (gross) 'unmeasured – not charged' properties which (based on sample taken) are mostly NI Water premises as per table below.

Description	Count
Sewage Disposal Works	596
Fire Authority For N I	12
Empty	14
TOTAL	622

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

Test Meters

NIW has a significant number of meters classified as 'test' from its legacy databases, which are being cleansed and reclassified as part of our data quality programme.

The survey and reclassification of test meters, initially identified through the Data Integrity Project, is still going. Of the 11,500 in total, duplicates were removed which reduced this figure to 10,898. 9,160 have been reclassified and 1,738 still need to be surveyed or re-surveyed following desktop investigation. Those that are found to be non-domestic billable should be 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 2011 indicates a reduction of 2,500 non-domestic test meters and 2,300 domestic test meters during 2010/11 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 meters are not double counted, they are no longer included in Table 7 non-domestic property counts (although NIW still retain this information for customer record and charging purposes). However, there are 392 domestic properties classified as site meters and there will be further investigations and analysis to be completed during 2011/12 to ensure these are classified correctly. It is likely that these properties are still being associated to the supply serving the development.

Overall, the number of non-domestic site meters has increased by 334 during 2010/11 and 34528 since March 2008, driven primarily as a result of extended non-domestic charging.

Confidence Grades

We would expect the confidence grade for this table to further improve throughout the year as the benefits of the data quality programme are realised.

The reporter's recommendations for AIR10 and IPS are being addressed as part of the overall data quality project and the confidence grades recorded in the table reflect the Reporters recommended confidence grades from the Undertaking 'A' Reporters Review (March 2011).

Lines 13 - 17 Population

The population data used by NIW has been derived from 2008 based Population Projections obtained from NISRA (Northern Ireland Statistics & Research Agency) website at

<http://www.nisra.gov.uk/archive/demography/population/projections/wni08cc.xls>.

NISRA Population Projections figures are based on births, deaths and migration information gathered by NISRA between 1st July and 30th June for each year. Net migration is the overall difference between the in-migration and out-migration for Northern Ireland and is calculated using health card registration and deregistration data for Northern Ireland.

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

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 7,994 and an occupancy rate is calculated at 0.866 to determine a total population for unconnected properties of 6,919. This number of unconnected properties differs from AIR10 as the number held on the company's Rapid system has been used. The total supplied population for all connected properties is calculated as 1,798.48 (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#

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.

NISRA have updated their communal population assessment. The communal population for 2010/11 was 30,690 compared to 30390 as used in AIR10. The farm population is $32,551 \times 2.50 = 81,378$. Therefore the non-household population is 112.07 (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 1,686.41 (x1000) (Line 13). The confidence grade for this line has been upgraded to a B2 to reflect that the data source NISRA has refreshed its population based on more recent information. This line remains the dominant figure within Section C of Table 7.

The population for non-household measured/unmeasured was derived from the % split between measured (not including farms) and unmeasured non-household properties and applied against the NHH communal population. The total farm population (81,378) has been classed as measured. The communal population (30,690) is split based on 13,648 unmeasured customers (27.4%) and 36,162 measured customers which excludes farms (72.6%). This therefore provides a population for measured NHH of 103.66 (x1000) (Line 16) and an unmeasured NHH population of 8.41 (x1000) (Line 15).

Line 17 is calculated by summing Line 13 + Line 14 + Line 15 + Line 16. This gives a figure of 1,798.48 (x1000) which is the total connected population.

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

DESCRIPTION	UNITS	DP	1	2	3	4	CG	
			REPORTING YEAR 2007-08	REPORTING YEAR 2008-09	REPORTING YEAR 2009-10	REPORTING YEAR 2010-11		
A HOUSEHOLD METER INSTALLATION								
1	Selective meters - installed	nr	0	0	3,945	4,427	B2	
2	Meter optants installed	nr	0	0	0	0	A1	
3	Meters installed - external meter with existing boundary box	nr	0	11,401	3,945	4,427	B2	
4	Meters installed - external meter without boundary box	nr	3,723	0	0	0	A1	
5	Meters installed - internal meter	nr	0	0	0	0	A1	
6	No. of meter installation requests outstanding for greater than three months	nr	0	0	0	0	A1	
B NON HOUSEHOLD METER INSTALLATION								
7	Selective meters - installed	nr			907	1,071	B2	
7a	Number of non household meters renewed	nr			779	5,814	B2	
8	Meter optants installed	nr			26	40	B2	
9	Meters installed - external meter with existing boundary box	nr			375	779	B2	
10	Meters installed - external meter without boundary box	nr			71	28	B2	
11	Meters installed - internal meter	nr			228	304	B2	
12	No. of meter installation requests outstanding for greater than three months	nr			20	27	B3	
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

Table 8 – Non Financial Measures – Water Metering (Total)**Water Metering Activities****Lines 1 - 6 - Household Meter Installation**

NIW installs meters on newly connected domestic properties as per the obligation associated with Article 81 of The Water and Sewerage Services (Northern Ireland) Order 2006. The company does not install meters in existing domestic premises or at the request of domestic customers (including those over 60 years of age) given the deferral of charging by the Northern Ireland Assembly (NIA) in March 2007. The company does not exercise its power to meter domestic properties upon change in occupancy or ownership for the same reasons as stated above. For these reasons the company cannot fully populate section A of Table 8 but does provide information 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 4427 water meters were installed at new domestic properties during the reporting period.

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 4427 water meters were installed in existing boundary boxes at new domestic properties during the reporting period

Lines 7 - 12 - Non Household Meter Installation

NIW installs water meters at newly connected non domestic premises as per the obligation associated with Article 81 of The Water and Sewerage Services (Northern Ireland) Order 2006.

The company in an attempt to increase its meter penetration is continuing to install meters across its non domestic revenue generating customer base, providing it is technically possible to do so.

Line 7 - Selective Meters Installed

Meters installed at the behest of NI Water include those properties selected because they are new non domestic connections or form part of the Unmeasured Non Household (UNHH) metering programme. The UNHH programme is as per the company response set out in Appendix 19 to the draft determination where a commitment was made to proactively change 1000 unmeasured customers to measured status per reporting year. 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 1071 which includes 1017 UNHH properties changed from unmeasured to measured status.

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 (MMRs) are logged on a local database and channelled through a maintenance process. The MMRs 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 2875 meters through the MMR process.

NIW also has a Proactive Meter Exchange (PME) programme which is designed to target approximately 1500-2000 small diameter meters for replacement each year. The meters selected for exchange are those deemed to be 17 years or more in age. With legacy data and data quality issues the company is targeting those meters installed prior to 1998 and or those meters with a whole life consumption reading >8000m³. During the reporting year NIW exchanged 1343 meters under the PME programme.

An additional 226 meters were replaced through an Engineering and Procurement contract for water mains rehabilitation as well as 1365 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 5809 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 40.

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 779.

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 28 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 304.

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 27.

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 1111 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 304 internal and 807 external installations.

Line 13 - Average Water Billed - Selective Metered Properties

NIW installs meters on all new connections as per the obligation associated with Article 81 of The Water and Sewerage Services (Northern Ireland) Order 2006; we do not however install meters in existing domestic premises given the deferral of charging by the Northern Ireland Assembly. NIW has also been proactively increasing its meter penetration across significant numbers of non domestic premises where technically possible and within budget restrictions during the reporting year.

The figure reported for line 13 is 223.78 l/prop/d. This is lower than the overall average consumption.

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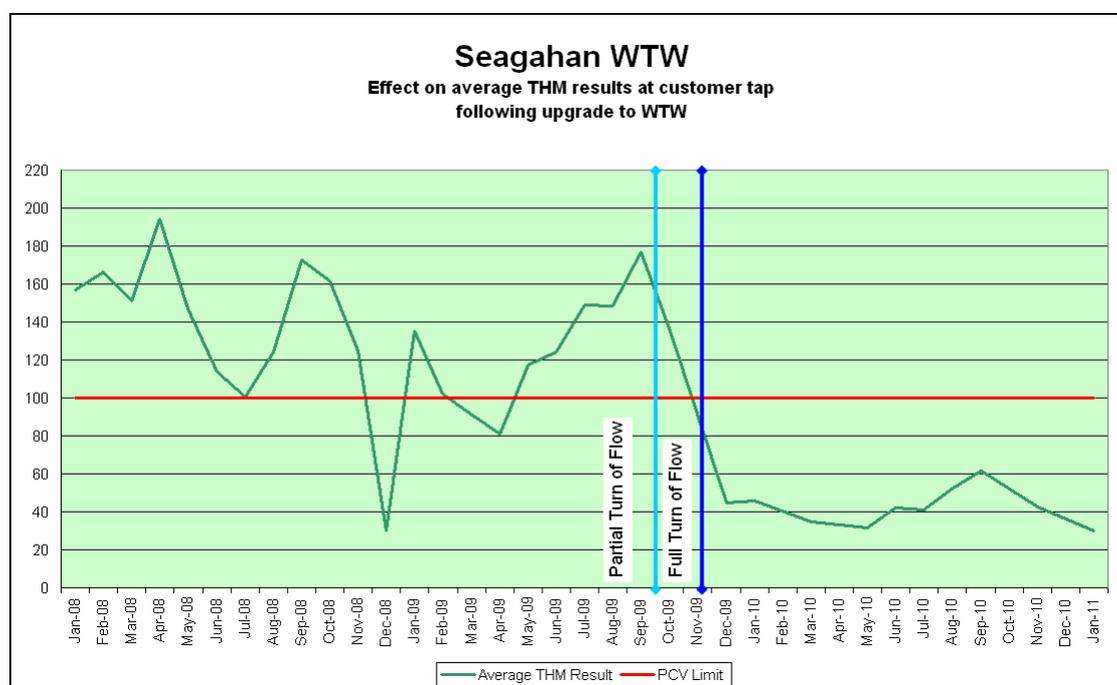
**ANNUAL INFORMATION RETURN - TABLE 9 NON FINANCIAL MEASURES
WATER QUALITY (TOTAL)**

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	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
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
3	Percentage distribution input not affected by Article 31s (or ADs)	%	3	61.924	A2	60.633	A2	98.665	A2	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
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
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
7	Conditioning water supplies to reduce plumbosolvency	MI/d	3	606.817	A2	614.605	A2	617.029	A2	623.693	A2
8	Reducing the risk from Cryptosporidium	MI/d	3	617.772	A2	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

Table 9 – Water Quality**Background – Year on Year**

The quality of water supplied by NI Water to customers has continued to improve between 2009 and 2010:

- Mean Zonal Compliance has increased from 99.74% in 2009 to 99.81% in 2010 (figure assessed by NI Water - waiting for confirmation from DWI).
 - The increase in water quality is to a large extent due to a decrease in exceedances of the Total Trihalomethane parameter as W2514 Seagahan WTW was upgraded. These reduced from 30 THM PCV exceedances in 2009 to 8 PCV exceedances in 2010.



- The Operational Performance Index (for NI Water based on turbidity, iron and manganese as agreed with the Drinking Water Inspectorate (DWI)) increased from 98.90% in 2009 to 99.08% in 2010 (NIW assessment on Turbidity, Iron and Manganese).
 - This figure was affected disproportionately downwards by a single iron exceedance in a very small zone fed from an iron rich source W2512 Gortlenaghan Borewell. This source has now been removed from supply. Without this exceedance the OPI TIM would have been 99.23%.
- The percentage compliance measured at Water Treatment Works (WTWs) increased from 99.92% in 2009 to 99.99% in 2010.

- The percentage compliance measured at Service Reservoir (SR) increased from 99.92% in 2009 to 99.97% in 2010.
- Overall out of 222,795 measurements (directive standards, national standards, indicator parameters and additional monitoring requirements) made at customer tap, WTWs, SRs and Authorised Supply Points, 99.93% 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 are not contiguous with the previous zones, and as such have been 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.

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.

Article 31 Undertakings or Authorised Departures

- Article 31 Undertakings – NI Water did not use Article 31 Undertakings during 2010.
- Authorised Departures – NI Water had 2 authorised departures in place during 2010 (details below) both of which had expired and were inactive at year end. The AD end date is the date authorised by DWI, being one year after the completion of the programme of work to allow commissioning. The ADs listed are at zonal level, and are derived from the original supplying WTW authorisations (available if required). Further ADs may be applied for in the future if required by DWI. In the table below, those zones where the AD had expired by the 31st December 2010 are shown.

2010 ADs by Water Supply Zone/Authorised Supply Point with AD End

Site Code	Site Name	Parameter	Units	AD Value	AD Start	AD End	Active at year end
ZN0704	Lough Bradan	Total					
	Drumquin	Trihalomethanes	ug/l	150	07/08/2007	06/08/2010	No
ZN0706	Lough Macrory	Total					
	Killyclogher	Trihalomethanes	ug/l	150	07/08/2007	06/08/2010	No

- In line with the AIR09 Reporter's recommendation, the individual associated WTWs were assessed against both being in service at the end of the year and also the expiry of their Authorised Departure. This

led to 1 WTW being assessed with this site being excluded from the calculation as highlighted.

2010 WTWs affected by Authorised Departures

Site Code	Water Treatment Works	MI/d	Out of service	AD Expiry	Included	Volume MI/d
W4513	Lough Braden	8.32		06/08/2010	No	0
Total affected DI						0

The entry for Line 1 is therefore 0.

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

During 2010 there were no new Article 31 undertakings or Authorised Departures in place for NI Water. The entry in Line 2 is therefore 0.

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

The calculation for this line was taken from the DI affected by ADs from the "2010 WTWs affected by ADs" table above measured against the overall average DI as assessed by leakage in the Supply DI Summary sheet referred at line 1. The entry in Line 3 is therefore 100.

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

During 2010 the final outstanding AD expired on 06/08/2010, leaving no ADs in place at 31/12/2010.

2010 ADs by Water Supply Zone showing population affected

Zone Code	Zone Name	Population	AD End	Affected by AD	Population Affected
ZN0704	Lough Bradan Drumquin	25398	06/08/2010	No	0
ZN0706	Lough Macrory Killyclogher	21143	06/08/2010	No	0
Total					0
All population					2250260
Percentage affected					0.000%

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 2010 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 2010 and are not included in the calculations.

Site Code	Site Name	MI/d Raw Water	
		Deterioration	Comment
W2501	Altmore	3.659	PAC for Pesticide removal
W4513	Lough Bradan	8.903	Upgrade for pesticide removal
Total		12.562	

Following MCPA exceedances in 2006/2007, Dorisland and Camlough WTWs had PAC installed and have increased monitoring of this parameter but no Authorised Departures in place. DWI is content with this methodology and again the sites have not been included in the calculations.

Site Code	Site Name	MI/d Raw Water	
		Deterioration	Comment
W2706	Camlough	4.131	PAC for Pesticide removal
W3317	Dorisland	26.320	PAC for Pesticide removal
Total		30.451	

Overall, therefore the volume for Raw Water deterioration is 0.

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 have the opportunity to query the proposed dose rates. Following the annual review, some of the dose rates for 2010 were reduced with most however remaining at the same levels.

Site Code	Site Name	MI/d Dosed Water
W2501	Altmore	3.659
W1702	Altnahinch	8.914
W1701P	Ballinrees PPP	26.944
W4722	Belleek	1.723
W2706	Camlough	4.131
W4301	Carmonney	20.728
W2802	Carran Hill (New works)	6.537
W2308P	Castor Bay PPP	79.106
W3315P	Forked Bridge PPP	22.015
W4306	Caugh Hill	19.452
W2509	Clay Lake	4.252
W4501	Derg	14.742
W3317	Dorisland	26.320
W3801	Drumaroad	115.069
W1303	Dungonnell	8.253
W3301P	Dunore Point PPP	122.188
W4541	Glenhordial	4.183

Site Code	Site Name	MI/d Dosed Water
W4701	Killyhevlín	27.337
W1501	Killylane	9.073
W4513	Lough Bradan	8.903
W1302	Lough Fea	11.751
W4523	Lough Macrory	12.123
W1301P	Moyola PPP	15.821
W2801	Fofanny (New works)	39.504
W2514	Seagahan	10.966
	Total	623.693

Line 8 - Reducing the risk from *Cryptosporidium*

NIW has no longer a regulatory requirement to carry out *Cryptosporidium* Risk assessments. These are now captured under Regulation 28 – Risk Assessments (DWSPS). Under this requirement DWSPs were carried out on all sources and are currently being assessed by DWI. For previous Annual Information Returns, this was the basis of calculating the Distribution Input for this line. 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.

Line 9 - Other

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

However, NIW had 4 current CPEOs (Consideration of Provisional Enforcement Order) at WTWs in force as at 31/12/2010. These are regarded as legal instruments under Northern Ireland legislation, and require NIW to carry out certain undertakings to achieve a DWI specified aim. 1 of these CPEOs has now been closed by DWI with a further 2 about to be closed. Details of these CPEOs are contained in the appendix to this commentary.

CPEO Code	LIMS Code	LIMS Name	Volume Supplied (ML/d)
CPEO/08/01	W4301	Carmoney	20.728
CPEO/08/02	W1501	Killylane	9.073
CPEO/08/04	W4501	Derg	14.742
CPEO/10/04	W2501	Altmore	3.659
		Total	48.202

Confidence Grades

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

Appendix - Line 9

Reference Number	<i>Location</i>	<i>Parameter</i>	Notice of Acceptance Action Point	Additional Information	NIW Action
CPEO/08/01 Issued 7/11/08	Carmoney Water Supply Area	Aluminium recurring failures.	3 (i) & (iii) 3 (ii)	DWSP: treatment and catchment & distribution risk assessment scores. Feasibility study on options & appropriateness of the upgrade to works.	First Draft version of DWSP issued to the inspectorate 28 Jan 2009. CIP approved on 13 August 2009. Contract awarded on 2 September 2009 to March 2011 Work on site commenced on 4 January 2010 High level scoping for Carmoney:- <ul style="list-style-type: none"> ▪ Reconfigure the front end coagulation and dosing system ▪ Install more efficient DAF nozzles ▪ Trial a new desludging system on one DAF unit to determine if increased performance can be achieved ▪ Reconfigure plant automation to allow 24 hour operation ▪ Refurbishment of aluminium filters

Reference Number	<i>Location</i>	<i>Parameter</i>	Notice of Acceptance Action Point	Additional Information	NIW Action
			3 (iv)	Refurbishment of the second set of GAC filters to be completed by 28 February 2009.	<ul style="list-style-type: none"> including valve automation ▪ Valve automation of GAC filters ▪ Valve automation of Manganese filters <p>Work on site operationally complete. Contractor to remain on site for further 2 months. Testing to be carried out to ensure all automation working satisfactorily and monitor final water quality.</p> <p>Under going final commissioning. 14 day tests planned for end of May 2011.</p> <p>Completed on 15 February 2009.</p>
			3 (v) (a)	Daily on-site process control checks.	Ongoing; daily checks carried out on site.
			3 (v) (b)	Alert levels for aluminium (150 µg/l) and	Commenced & ongoing.

Reference Number	<i>Location</i>	<i>Parameter</i>	Notice of Acceptance Action Point	Additional Information	NIW Action
			3 (vi)	<p>turbidity (0.5 FTU) are in place at the treatment plant. Should these be triggered they would instigate an investigation of the treatment processes by the plant operators.</p> <p>Continue to monitor final water aluminium levels, and the aluminium levels throughout the distribution system.</p> <p>Updates on progress with remedial action at monthly NI Water/DWI meetings.</p>	<p>Ongoing monitoring of aluminium levels Three-monthly analytical data summary report data for January to March 2011 provided to DWI 4/05/2011.</p> <p>Ongoing</p>

Reference Number	<i>Location</i>	<i>Parameter</i>	Notice of Acceptance Action Point	Additional Information	NIW Action
<p>CPEO/08/02</p> <p>Issued 7/11/08</p>	<p>Killylane Water Supply Area</p>	<p>THMs recurring failures.</p>	<p>3 (i)</p> <p>3 (ii)</p> <p>3 (iii)</p>	<p>DWSP: water treatment works risk assessment scores.</p> <p>Undertake a review of options and appropriateness of the treatment methodology required to treat Killylane raw water.</p> <p>Undertake a DWSP pilot scheme of the Killylane distribution system.</p>	<p>Water Treatment works risk assessment scores completed and draft DWSP provided to the Inspectorate.</p> <p>AO approval granted for a treatment specialist to carry out an assessment. Invitation to tender issued 7th Sept 2009. Contract awarded to Jacobs Data gathering and site investigations commenced 26/10/2009 Interim Report produced 31/12/2009 Final Report due end March 2010. Killylane WTW Treatability Appraisal Study - Final Report issued 31 March 2010. Further work identified in the report. Copy of report issued to DWI 16/04/2010</p> <p>Draft DWSP and risk scores for the Killylane Distribution System provided to the Inspectorate on 23 Mar 2009.</p>

Reference Number	<i>Location</i>	<i>Parameter</i>	Notice of Acceptance Action Point	Additional Information	NIW Action
			3 (iv)	DWSP: catchment and distribution risk assessment scores.	Risk assessment scores and draft DWSP for catchment and distribution elements completed. Draft DWSP issued to inspectorate on 23 Mar 2009. DWSP Risk Assessment for Killylane WTW and Supply system submitted to Inspectorate – 23.12.10
			3 (v) (a)	Replacement of the remaining nozzles in the DAF cells.	A survey of the water quality ex DAF cell following replacement of the Earth-tech nozzles showed only marginal improvement. It is not proposed to replace the nozzles in the second DAF cell during 2009. Letter of 6 May 2009 to the Inspectorate refers.
			3 (v) (b)	Cease disposal of the WTWs residual sludge on the catchment.	WTW residual sludge is now taken off site for pressing at Dorisland WTW
			3 (v) (c)	Undertake a trial of a new lime dosing system post DAF.	The lime dosing pipework has been replaced with a larger bore pipe (3/4" pipe with no connections). This has improved the reliability and stability of the dosed raw

Reference Number	<i>Location</i>	<i>Parameter</i>	Notice of Acceptance Action Point	Additional Information	NIW Action
			<p>3 (vi) (a)</p> <p>3 (vi) (b)</p>	<p>Refurbishment of Rashee and Ballybracken SRs.</p> <p>Slimero SR to be cleaned.</p>	<p>pH and the lowering of the coagulation pH. From 1.08.09 the dosed raw pH was gradually reduced to pH 6.3. Improvements to the operation of the primary filters to be investigated (topping up and back-wash modification).</p> <p>Water quality will be monitored following these changes prior to making changes to the inter-stage pH.</p> <p>Refer to attached list of actions taken at Killylane WTW – Jan & April 2010 QR meeting updates.</p> <p>Completed Dec '08. Back in service 20/12/08 & 07/01/09 respectively.</p> <p>By 31/12/08. Completed 12/12/08.</p>

Reference Number	Location	Parameter	Notice of Acceptance Action Point	Additional Information	NIW Action
			3 (vii) (a) 3 (vii) (b) 3 (vii) (c) 3 (vii) (d)	Monitor chlorine (Cl) residuals of the final water. Monitor Cl patterns and Cl demand throughout distribution system. Monitor THM levels in final water; forming potential; and levels in distribution system. TOC monitoring of the raw water. Progress updates at monthly NIW/DWI meetings.	Three-monthly analytical data summary report data for January to March 2011 provided to DWI 04/05/2011. Ongoing study of chlorine residuals at SRs and extremities of system. Distribution schematic produced for DWSP to include Cl residuals. A trial of Intellisonde Units to monitor Water Quality in the distribution system is to be carried out. The units have been installed on the outlet main at Killyglen & Ballymullock SR. Water quality will be monitored for a period of 6 months. Monitoring of data showed limited reliable data – the use of the units will be reassessed. Ongoing

Reference Number	<i>Location</i>	<i>Parameter</i>	Notice of Acceptance Action Point	Additional Information	NIW Action
<p>CPEO/08/04</p> <p>Issued 7/11/08</p>	<p><i>Derg Water Supply Area</i></p>	<p><i>THMs</i> Recurring failures.</p>	<p>3 (i)</p> <p>3 (ii)</p>	<p>DWSP: catchment, treatment & distribution risk assessment scores.</p> <p>Continue to implement the appropriate operation of the polyelectrolyte dosing at the works inlet.</p>	<p>DWSP risk assessment scores for catchment, treatment and distribution completed.</p> <p>Copy of the Draft DWSP for the Catchment, Treatment & Distribution system issued to the DWI on:- 13/4/2010 - Catchment & Treatment sections 17/4/2010 – Distribution section DWSP Risk Assessment for Derg WTW and Supply system submitted to Inspectorate – 23.12.10.</p> <p>Review of Reg 28 Risk Assessment to be undertaken.</p> <p>The measures related to the operation of the temporary polyelectrolyte dosing at the works inlet were completed.</p> <p>More upgraded control coagulation system installed – new Aztec CT1000 Colour monitor has more extensive range and will allow for a more accurate dose.</p>

Reference Number	<i>Location</i>	<i>Parameter</i>	Notice of Acceptance Action Point	Additional Information	NIW Action
			<p>3 (iii) (a)</p> <p>3 (iii) (b)</p> <p>3 (iv) (a)</p> <p>3 (iv) (b)</p>	<p>Refurbishment of Tullywisker SR.</p> <p>Keep SR retention times under review.</p> <p>Monitor Chlorine (Cl) residuals of the final water.</p> <p>Monitor Cl patterns & Cl demand throughout distribution system.</p>	<p>Coagulation system from Achromatic installed– controlling Alum dose from Nov 2009.</p> <p>Completed. – September 2009</p> <p>Ongoing. No changes currently have been made due to network requirements. Will be kept under review.</p> <p>Increased control of chlorine dosing in place at WTW. Chlorine Set point 1.3mg/l : Range 1.2-1.5mg/l</p> <p>Ongoing study of chlorine residuals at SRs and extremities of system. Distribution schematic produced for DWSP to include Cl residuals.</p> <p>Ongoing monitoring of THMs. Monthly sampling programme in place at number of SRs for THMs, TOCs, Cl residuals and UV254 (during period April – Oct)</p>

Reference Number	Location	Parameter	Notice of Acceptance Action Point	Additional Information	NIW Action
			3 (iv) (c)	Monitor THM levels in final water; forming potential; and levels in distribution system.	<p>DWSP risk assessment scores for THMs show THM levels in the distribution system improving following actions taken to control Cl residuals:-</p> <p>2007 & 2008 Score = 12 2009 Score = 6 2010 Score = 12 (score for 2010 - 4 if elevated results during July /Aug 2010 period removed). Updated Reg 28 RA to be provided to DWI by 30 May 2011. Continue with increased monitoring and re-evaluate risk scores in Oct 11.</p>
			3 (iv) (d)	<p>TOC monitoring of the raw water.</p> <p>Progress with THMs action plan discussed at Quarterly Review meetings.</p>	<p>Ongoing monitoring Three-monthly analytical data summary report data for January to March 2011 provided to DWI 04/05/2011.</p> <p>Ongoing.</p>

Reference Number	<i>Location</i>	<i>Parameter</i>	Notice of Acceptance Action Point	Additional Information	NIW Action
				Updates on progress with remedial action at monthly NI Water/DWI meetings.	Ongoing.

Reference Number	Location	Parameter	Notice of Acceptance Action	Additional Information	NIW Action
CPEO/10/04	Altmore WTW and water supply area	MCPA	3.1 3.2 3.3	<p>Removal from service of Altmore WTWs (W2501) and supply the area with water from Castor Bay WTWs (W2308P) by 31 March 2011.</p> <p>Provide monthly updates to the Inspectorate on progress with the work programme for the removal of Altmore WTWs. The Inspectorate requires updates to be provided by: 18 February 2011; 18 March 2011; with the final update on completion of the work programme on or before 31 March 2011.</p> <p>To implement a weekly sampling programme for MCPA for both raw and treated water at Altmore WTWs from 1 February 2011 until the works is removed from service. The sampling frequency will be kept under review by the Inspectorate. The results from the enhanced</p>	<p>Altmore WTW (W2501) removed from service on 14 April 2011. Email notification to the DWI on 14 April 2011.</p> <p>Updates on progress with the work programme to remove Altmore WTW from supply provided to the Inspectorate:- 14 February 2011 10 March 2011 24 March 2011 1 April 2011 7 April 2011 Notification of removal from supply provided to the Inspectorate on 14 April 2011.</p> <p>Weekly sampling programme for MCPA for both raw and treated water at Altmore WTWs and in the distribution system at customer taps from 1 January 2011. Results provided to the Inspectorate:- 14 February 2011</p>

Reference Number	Location	Parameter	Notice of Acceptance Action	Additional Information	NIW Action
				<p>sampling programme are to be provided to the Inspectorate as soon as they become available.</p> <p>3.4 To operate the current treatment processes at Altmore WTWs to optimum effect, to include the continuous dosing of powdered activated carbon (PAC) at the maximum dose available, until the works is removed from service by 31 March 2011.</p> <p>3.5 To continue liaison with the Northern Ireland Environment Agency to investigate the use of MCPA in the catchment area for Altmore WTWs and to continue liaison with all stakeholders with a view to issuing guidance on the safe use of pesticides to local land owners. Ongoing</p>	<p>10 March 2011 25 March 2011 7 April 2011</p> <p>NIW continue to operate the current treatment processes at Altmore WTWs to optimum effect, to include the continuous dosing of powdered activated carbon (PAC) at the maximum dose available, until the works removed from service.</p> <p>Ongoing liaison with the Northern Ireland Environment Agency (NIEA) to investigate the use of MCPA in the catchment area for Altmore WTWs. NIW participated in a NIEA Pesticide Awareness Workshop on 15 March 2011 – Altmore WTW was included in the NIW presentation on the risk and potential impact from the use of pesticides in drinking water catchment areas. NIEA guidance leaflet issued at the workshop.</p>

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
			REPORTING YEAR	CG	CURRENT YEAR						
			2007-08		2008-09		2009-10		2010-2011		2011-2012
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	0.00
2	Billed measured non-household	MI/d	2	124.68	134.05	127.02	134.71	134.71	134.71		
3	Billed measured	MI/d	2	139.44	134.05	127.02	134.71	134.71	134.71		
4	Billed unmeasured household	MI/d	2	306.61	311.07	310.06	318.04	318.04	318.04		316.39
5	Billed unmeasured non-household	MI/d	2	24.48	20.80	11.38	9.04	9.04	9.04		
6	Billed unmeasured	MI/d	2	331.09	331.87	321.44	327.08	327.08	327.08		
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
7a	Estimated water delivered per unmeasured household	l/prop/d	2	443.29	B4	481.59	B3	470.49	B3	479.44	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
9	Per capita consumption (meas'd h'hold - excl s/pipe leakage)	l/h/d	2	158.34		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	
11	Underground supply pipe leakage (ext. metered households)	l/prop/d	2	0.00		32.98		31.01		31.01	
12	Underground supply pipe leakage (other metered h'holds)	l/prop/d	2	0.00		0.00		62.02		62.03	
13	Underground supply pipe leakage (void properties)	l/prop/d	2	63.58		65.97		62.02		62.03	
14	Meter under-registration (measured households)	MI/d	2	0.53		0.00		0.00		0.00	
15	Meter under-registration (measured non-households)	MI/d	2	5.53		9.84		9.62		10.18	
16	Distribution system operational use	MI/d	2	4.97		4.72		4.80		4.66	
17	Water taken legally unbilled	MI/d	2	25.09		29.37		25.89		21.96	
18	Water taken illegally unbilled	MI/d	2	2.48		1.21		3.54		6.08	
19	Water taken unbilled	MI/d	2	27.57		30.58		29.43		28.04	
20	Water delivered (potable)	MI/d	2	498.10		496.50		477.89		489.83	
21	Water delivered (non-potable)	MI/d	2	0.00		0.0		0.00		0.00	
22	Water delivered (non-standard rates: potable)	MI/d	2	4.20		13.90		0.00		0.00	
23	Water delivered (non-standard rates: non-potable)	MI/d	2	0.00		0.00		0.00		0.00	
24	Distribution losses	MI/d	2	111.38		131.49		140.55		130.66	
25	Total leakage	MI/d	2	156.52	B3	180.93	B4	186.86	B4	176.97	B4
26	Distribution input	MI/d	2	614.45	B2	632.71	B2	623.24	B2	625.15	B2
27	Bulk supply imports	MI/d	2	0.00		0.00		0.00		0.00	
28	Bulk supply exports	MI/d	2	0.22		0.34		0.34		0.52	
29	Water treated at own works to own customers	MI/d	2	614.45		632.37		622.90		624.63	
30	Overall water balance	cg			B2		B3		B2		B2
C SECURITY OF SUPPLY											
31	Security of supply index - company's planned levels of service	nr	0	-26		42		88		97	
32	Security of supply index - reference levels of service	nr	0	-26		42		88		97	

Table 10 – Non Financial Measures - Water Delivered**Introduction**

As a direct result of the Freeze Thaw event in December 2010 reviews were undertaken by both external reporters and NIAUR. The common theme from the resultant reports was that leakage on customers' supplies had a major bearing on the short term distribution problems that arose during the incident. However the cumulative effect of the vast number of bursts that were located on private supplies had a dramatic effect on leakage figures reported by NI Water.

In response to the event a Table 10 has been completed that takes into account the major influences of the extreme weather with this the accompanying commentary. This assessment estimates a post MLE leakage figure of 176.97 MI/d. An estimate of leakage without consideration of the exceptional customer demand gives a leakage figure of 181.99 MI/d.

The reported leakage figure of 176.97 MI/d is 1.97 MI/d above the 2010/11 annual target of 175 MI/d. A high level comparison of the figures with and without consideration of the additional winter demand relative to the target gives 28%/72% split between company and customer it is consistent with the previous estimate of 31%/69% as submitted to NIAUR as part of the freeze thaw incident investigation.

NI Water has followed the methodology described in Chapter 10 of the Northern Ireland Authority for Utility Regulation (NIAUR) Annual Information Return Reporting Requirements and Definitions Manual 2011. 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 key components of the Water Balance that have been reviewed and subsequently revised are as follows:-

Analysis of the meters read post the Freeze Thaw indicated that monthly read meters had an additional consumption of 1.63% in comparison to the previous year. Similarly consumption for six monthly read meters had increased by 8.25%. During the freeze thaw period there was additional consumption. There are some meters that have still to be read in the period April to June 2011 and may account for additional demand.

1. Billed measured non-Households

No adjustment has been made to this category and no account has been considered for monthly or six monthly that have not yet been post the freeze thaw.

2. Billed unmeasured non-Households

An assessment has been made for this category which is unmeasured to allow for increased consumption during the extreme weather period. A figure of 8.25% has been applied to this component based on the analysis of

unmeasured non-Household consumption. This equates to an additional consumption of 0.65 Ml/d.

3. Billed unmeasured Households

To account for changes in consumption habits during the extreme weather period in relation to unmeasured Households Crowder Consulting were engaged to review two specific elements.

The first was to consider the impact of plumbing losses on the Bottom Up MNF calculation during the Freeze Thaw. This was based on a desk top study on the MNF of non-intervention DMAs and an analysis of the MNF in PCC areas in comparison to a stable period i.e. November. The outcome of this review had an impact on the Bottom Up calculations.

Secondly, consideration was given to reflect the rural nature of our network whereby rural and remote rural properties demonstrate higher consumption than our PCC stock which are generally urban based. This study reviewed the night use trends during both December and January and directly affects the Top Down calculation.

4. Water taken unbilled during the extreme weather period.

To obtain our best estimate of for certain components of water taken unbilled an allowance has been made for additional demand as a result of the extreme weather. The value of 8.25% is only applied to metered volumes or unmeasured calculations based on metered volumes egg measured WwTW and the equivalent unmeasured Wwtw.

5. Household and non-Household night use allowances during the extreme weather period.

As a result of the prolonged cold spell during both December and January an investigation has been undertaken to assess the impact of this on reported Bottom Up leakage. The analysis focuses on accurately calculating actual plumbing losses from customers' internal pipework. As these losses are located within customers' properties they are excluded from the leakage calculation as they are considered to be part of consumption. A review of the additional plumbing losses for the Freeze Thaw period was undertaken by Crowder Consulting and they have been used in the Bottom Up assessment.

Winter Weather

The conditions that Northern Ireland experienced in late November, and throughout December, proved to be very challenging for NI Water as they attempted to satisfy abnormal demands. An extract from data supplied via the Met Office web site retrieved in relation to the month of December stated that,

'December was an exceptionally cold month with mean temperatures over 5°C below the 1971-2000 average. Provisionally it was the coldest calendar month for over 100 years, being slightly colder than 1947. There were some severe frosts, and the number of days with air frost days was the highest in December in over 50 years. During the second half of the month, many places had sub-zero temperatures continuously for over seven days. During this

period, new Northern Ireland records were set for low night minimum and low day maximum temperatures. Overall, December was drier than average, with about 50% of the normal amount. Much of the precipitation fell as snow, especially in the first and third weeks.'

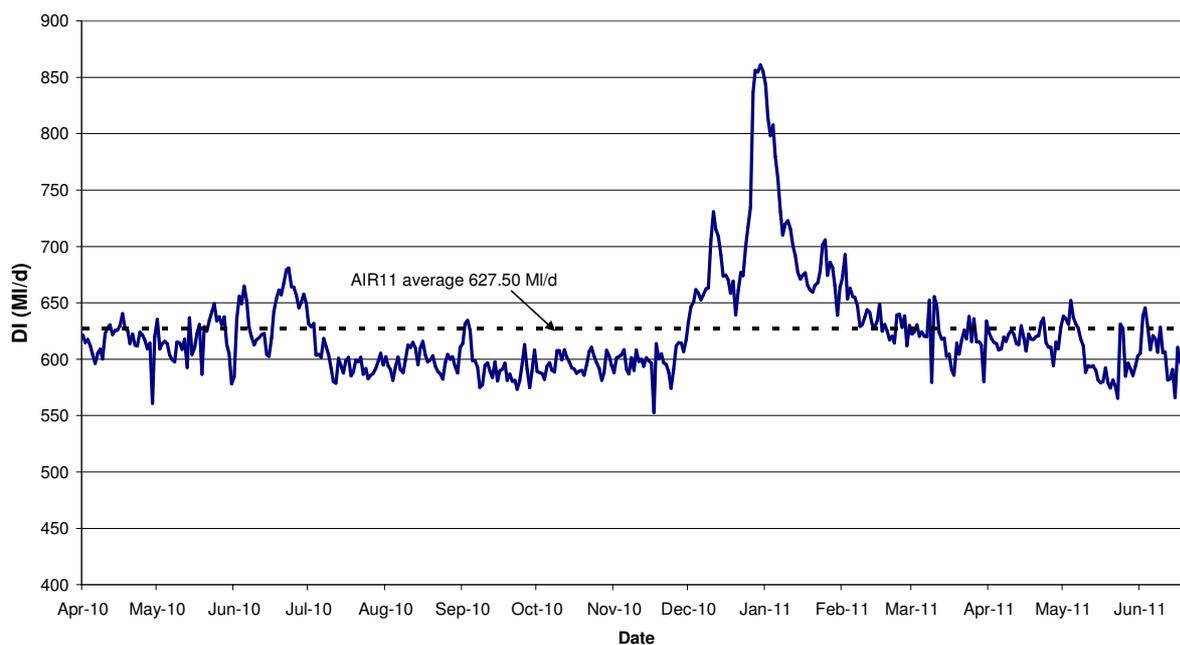
In effect the conditions encountered were unprecedented. Snow and freezing conditions rendered leak detection virtually impossible across certain parts of Northern Ireland, particularly in rural areas. A record low temperature was registered in Castleterg on 23rd December at -18.7°C and the network was entering unfamiliar territory. Elsewhere fittings and street furniture in urban areas were frequently buried under ice and snow as roads and footpaths were in a treacherous condition.

Met Office records for Castleterg on 26/27th December 2010 indicate that temperatures rose by over 21°C from an overnight minimum of -14.6°C to a maximum daytime temperature of 6.8°C . On the 25th December 2010 the Met Office's forecast was "a slow rise in temperatures expected to continue to Monday (27th)." However the thaw arrived overnight and caused unprecedented demand.

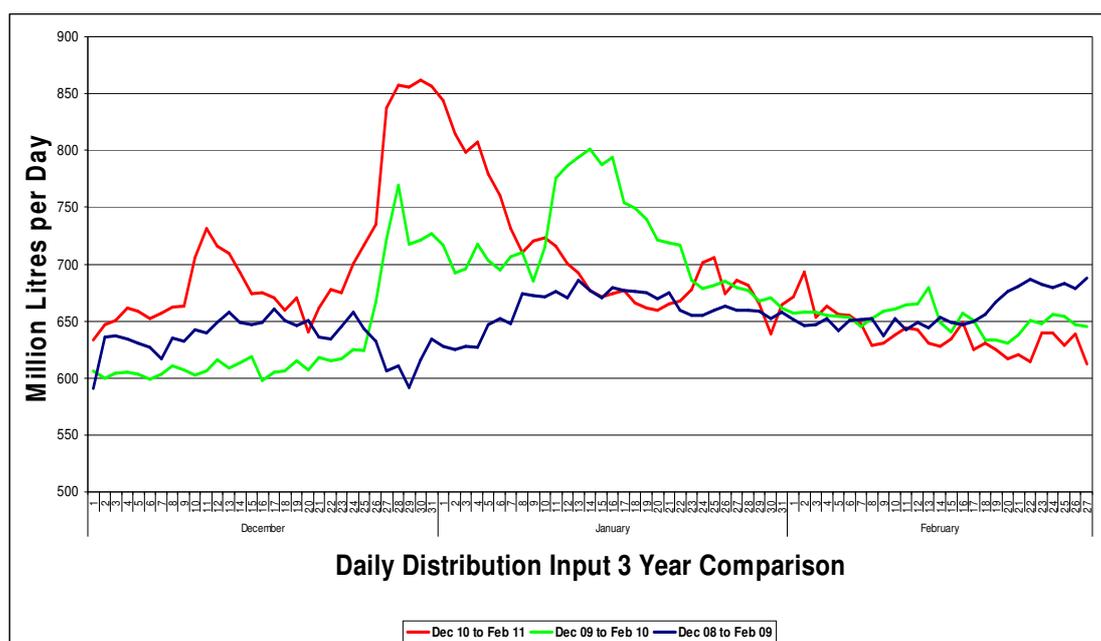
Water Demand

The average DI for 2010/11 was 627.50 MI/d and for the months of July to November 2010 the DI was below 600 MI/d. On the 26th December the DI was 734.7 MI/d and on the 27th it rose to 837.1 MI/d. The DI reached a peak of 861.1 MI/d on 30th December as service reservoirs recovered. It has been estimated that at peak demand on the 27th December total demand was in excess of 1000 MI/d which was stated in the Utility Regulator's report on the freeze thaw incident. The graph shows the scale of DI during December 2010 compared to the rest of the year and the subsequent recovery that occurred.

**Daily Distribution Input
April 2010 - Present**



The demand on the distribution system was immense. There were only a small number of trunk mains bursts which were dealt with quickly and had little impact on the overall situation. On the distribution network breaches increased from an average of 10 a day to an average of 30 a day in the peak period after Christmas. At its peak, demand on 27th December reached 38% above the average figure and some 20% above the actual capacity of the company water treatment works. However the biggest impact on demand was as a result of defects within customer properties. The graph below shows the DI increase in 2010/11 compared to the last two years.



Major Incident

From the 27th December 2010 to 6th January 2011 a Category 1 Major Incident (highest level) was in place. As demand increased customers lost supply and in some areas rotation of supplies was put in place. The supply network was stabilised and recovery occurred. However there were very significant issues encountered and in the aftermath of the event an investigation was undertaken by both the Utility Regulator and by two external reviewers.

Prior to the incident NI Water put in place measures to increase resources in anticipation of increased levels of leakage. Detection resources were increased by 47% at the peak of the event to reduce the impact and specifically address the customer side leakage which was calculated at 80% at peak demand during the incident period.

During the incident all available resources were utilised from both within and outside NI Water. The strong operational response was recognised by the Utility Regulator within their review report. This was at a time when the thaw had coincided with the holiday period when many commercial premises were closed, rented properties vacant and holiday homes unoccupied. From the

data captured over the event, numerous large bursts were recorded on fire mains and within 35% of all schools in Northern Ireland. There were 6,700 leak related incidents within 4,700 Northern Ireland Housing Executive properties which was 5.4% of all their housing stock. NI Water located approximately 1200 defects on private property. In addition the Association of British Insurers (ABI) indicated that there were 6,400 claims within Northern Ireland because of burst pipes which they estimated at a cost of £40 million.

The cumulative effect of these internal leaks and additional household consumption was to increase the bottom up leakage by some 60 MI/d during December alone which equates to 5 MI/d when it is applied to the 12 month rolling average. To put this in perspective the target reduction across the year was 12 MI/d. Additional resources have been maintained and significant effort has been made by NI Water in addressing the excess leakage. NI Water was on target at the end of November 2010 to achieve an average figure of 175 MI/d during the 2010/11 year.

In summary, the outputs of this water balance are that the Integrated Flow Method of leakage assessment has given a figure of 194.60 MI/d for total leakage and the Minimum Night Flow Method has provided a figure of 168.54 MI/d. When the resulting imbalance between the two methods of 26.06 MI/d is compared to the Distribution Input figure of 627.50 MI/d (pre MLE), it provides a percentage discrepancy of 4.15%. 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 176.97 MI/d.

Lines 1 to 3 – Billed Measured Household and Non-Household Volumes

Line 1 – Billed Measured Household

There are no billed measured households and the value is therefore zero.

Line 2 – Billed Measured Non-Household

The reported value for water delivered to non-Households has increased from 127.02 in AIR10 MI/d to 134.71 MI/d in AIR11.

For AIR11, NI Water has used the same type of report as per AIR10 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.

The figure of 134.71 MI/d does not include for any allowance for meters that have not yet been read yet there is likely to be additional consumption as a result of the freeze thaw.

In accordance with the Utility Regulators reporting requirements a volume of 1.39 MI/d (pre MUR and pre MLE) is included and accounts for water delivered which is associated with customer rebates. This allowance was not reported in AIR10.

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 AIR10.

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 AIR11 is 318.04 MI/d. The figure of 318.04 MI/d includes for the assessment of additional consumption that occurred during the Freeze Thaw period.

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

- Non-Household Population – Sourced from the recent NISRA 2008 based population projections which is consistent with AIR10.
- 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)
- PCC Night Use Allowance Assessment undertaken for December and January as per Crowder Consulting Report 'Impact of the Freeze Thaw event on Customer Demand' June 2011. Further adjustment made to account for rural and remote rural behaviours.

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 and is specific to NI Water's domestic consumption monitor meters and is consistent with AIR10.

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 990 properties to determine more up to date information on property types, numbers of vacant properties and ultimately occupancy rates. The data from the 2010/11 survey has been input into the AIR11 consumption monitor assessment. The overall occupancy rate is 2.26 for AIR11. The occupancy rate for AIR10 was 2.49. The NISRA interpolated occupancy rate for Northern Ireland is 2.50 for 2010/11.
- As per AIR10 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.

At the time of the freeze/thaw in late December 2010 and January 2011 NI Water advised customers not to run taps. There is some evidence that this was occurring with domestic customers and was likely to have been a factor in relation to additional water usage.

An initial analysis of the distribution input across various DMA types throughout the Freeze Thaw period demonstrated that leakage in rural and remote rural DMAs was notably higher than in urban DMAs. Crowder Consulting then embarked on an investigation into DMA behaviours during December and January for the various DMA types. This indicated that plumbing losses increased considerably depending on the rurality of the DMA and as a result plumbing losses have been applied to the night leakage calculations. The revised figure for December is 2.64 l/prop/hour and for January it is 1.38 l/prop/hour. The original figure for plumbing losses was 0.5 l/prop/hr.

Line 5 – Billed Unmeasured Non-Household

The reported value for Billed Unmeasured Non-Household for AIR11 is 9.04 MI/d. The figure of 9.04 MI/d includes for the assessment of the additional consumption that occurred during the Freeze Thaw period. The value reported in AIR10 was 11.38 MI/d

NI Water has been undertaking a programme of meter installation of unmeasured non household properties. The number of unmeasured non-Household properties has reduced from 16,050 to 13,648.

The assessed unmeasured non-household figure for AIR11 is 211.65 m³/prop/yr, which is a reduction compared to a figure of 223.57m³/prop/yr for AIR10. The figure of 211.65m³/prop/yr includes for an estimate of additional demand of 0.65 MI/d that occurred as a result of the freeze thaw. This estimate was based on the work undertaken in reviewing actual NHH reads this year compared to last year and then applying an uplift.

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 AIR11.

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 AIR11 is 662.37 l/prop/d. The figure reported for AIR10 was 665.60 l/prop/d.

The allowance for unmeasured non-Household properties for AIR11 is 211.65 m³/prop/yr. This figure does include an estimate for additional demand that occurred during the freeze thaw period. The figure used for AIR10 was 223.57 m³/prop/yr.

Line 7a – Estimated Water Delivered Per Unmeasured Household

The post MLE figure for estimated water delivered per unmeasured household for AIR11 is 479.44 l/prop/d. The figure reported for AIR10 was 470.86 l/prop/d and then amended to 470.49. The methodology adopted for AIR11 is consistent with the revised methodology used to calculate the AIR10 figure of 470.49 and consistent with NIAUR's AIR11 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 AIR11 is 164.19 l/hd/d. The figure reported for AIR10 was 158.41 l/hd/d.

NI Water has 107 domestic consumption monitors set up specifically to monitor unmeasured household consumption. These sites are small (average size of 50 properties), permanently bounded, monitored for leakage, and flows into them are recorded by meters. NI Water has 98% GSM flow logger coverage of these areas. The remainder are monitored through manually downloaded loggers.

The average (pre MLE) PCC figure has been calculated as 144.74 l/hd/d. This assessment is based on 12 months consumption data from 1 April 2010 to 31 March 2011. This compares to a pre MLE figure of 141.53 l/hd/d for AIR10.

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, 990 properties have been surveyed in 2010/11 to update the area property counts and populations, recalculate occupancy rates for all household types and to produce an average occupancy rate. The information has been incorporated into the AIR11 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 AIR10.

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 been assessed for AIR11 as 46.31 MI/d stays the same. The figure for AIR10 was 46.31 MI/d. The unit values are 62.03 l/prop/d for unmeasured, other households and void properties, with a value of 31.01 l/prop/d being calculated for externally measured households.

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 25% of total leakage. This figure is comparable to those reported by water companies in England and Wales.

From the "Ofwat Service and Delivery Report 07/08" it was ascertained, as per AIR10, 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. This is the assumption that has been made in the estimation of per property values for underground supply pipe leakage and is consistent with AIR09. Since, in NI Water, the unmeasured non-household use is based on the measured non-household use, this assumption will also be applied to the unmeasured non-household.

To convert the total underground supply pipe leakage volume to the required l/prop/d figure, the total SPL volume has been divided by the sum of the number of unmeasured household properties, the number of void properties

and half of the total number of non-household properties. The resulting value is the figure in l/prop/d for underground supply pipe leakage for internally measured and other properties. The resulting figure is divided by two as an estimate for underground supply pipe leakage on externally measured properties. 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 AIR10 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 been adopted for AIR11. For non-household consumption the MUR figure remains at 8.33%. Similarly the MUR value for household consumption stays at 7.39%.

Line 16 – Distribution System Operational Use

The reported value of Distribution System Operational Use (DSOU) for AIR11 is 4.66 MI/d. The value reported for AIR10 was 4.80 MI/d.

A significant review of DSOU was undertaken for AIR08. The methodology adopted has again been used for AIR11. 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 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 29.43 MI/d in AIR10 to 28.04 MI/d in AIR11.

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

- As per AIR10 the volume of water used by WTWs has been included in Water Taken Legally Unbilled.
- Data has again been obtained from the Northern Ireland Fire & Rescue Service. 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 AIR10.
- Unmetered SPS consumptions have been assessed on the average consumption of metered SPSs.
- 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 4.41 MI/d, including MUR, pre MLE.
- Assessment of unmeasured 'fire main' consumption due to customer bursts during the recent Freeze Thaw incident.

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)

For a number of years NI Water has included under this line those customers who use in excess of 100,000 m³ and as they put in place water efficiency measures they received a discount. Following on from clarification from the Utility Regulator customers in excess of 100,000 m³ should no longer be considered under line 22 for water delivered at non-standard rates. Therefore 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 AIR11 are estimated to be 130.66 MI/d. This is a decrease on the AIR10 figure of 140.55 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 AIR11 is 176.97 MI/d. The reported figure for AIR10 was 186.86MI/d.

Total leakage is also calculated using an MNF methodology. For AIR11 reported pre MLE MNF method leakage is 168.54 MI/d. The figure reported for AIR10 was 178.12 MI/d.

NI Water has an extensive DMA network (approx. 1070 DMAs) covering 99% of all properties in Northern Ireland. Over 80% of these DMAs are monitored with electromagnetic meters with a direct link to the company telemetry system. The remaining DMAs are monitored through mechanical meters and GSM/standard flow loggers. GSM loggers have an automatic link to the Company's telemetry system. Standard loggers are downloaded on a monthly basis and MNF data input into the telemetry system.

NI Water currently uses 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. The TDMS system also acts as a repository for the DMA attributes such as property counts, mains lengths and AZNPs. The TDMS system has a number of functionality limitations that hinder a more robust analysis of the minimum night flows. As a result NI Water has procured a new leakage management system to mitigate the restrictions of the current system. The new system will

run in parallel with TDMS during 2011/12. However NI Water has agreed with NIAUR a consistent reporting methodology during the PC10 period.

Data from other corporate systems is used in TDMS. Using the DMA meter configurations held within TDMS, a minimum night flow is calculated for the DMA. This is based on an actual minimum recorded between 02:00 and 06:00 of the DMA inlet meter, with deductions made at the concurrent time for the outlet meters (including continuously monitored customers). Minimum Night Flow and DMA attributes are then extracted from the system on a monthly basis in to MS Excel spreadsheets to perform leakage calculations.

DMA minimum night flow (MNF) is determined using a 20th percentile method. Minimum night flows are recorded on a daily basis. The 20th percentile of a month's data is then identified. The MNF values for each DMA are then aggregated to resource zone level. Night use allowances for household and non-household properties, for each resource zone, are subtracted from the aggregated Minimum Night Flow (MNF) values to calculate a night leakage figure for each resource zone. The company specific night use allowance for households was updated by Crowder Consulting for AIR10 and the figure is 2.42 l/prop/h. This figure remains the same for AIR11 with the exception of December and January which are calculated at 4.08 l/prop/h and 3.03 l/prop/h respectively. For non-household properties the figure used for AIR11 is 8 l/prop/h which is the same figure used for AIR10. Revised figures of 13.51 l/prop/h and 10.26 l/prop/h have been calculated for December and January. The non-household night use figure is from the WRc Managing Leakage Suite of Reports. A non-household night use model has been developed and company specific figures can be attributed to the various categories of customer. The non household night use assessment has not been included within AIR11 as it is considered more appropriate that the assessment is introduced at a later date in conjunction with the new leakage management software which complies with the Utility Regulator's requirement to maintain consistency throughout the PC10 period.

The leakage has been calculated at resource zone level to accommodate the shortcomings of the current non-household night use model. As all non-households are allocated the same night use allowance, regardless of size and usage, this can lead to under/over estimation of leakage at DMA level. In some cases this can lead to "negative" leakage. By aggregating the night use to resource zone level and subtracting this value from the aggregated minimum night flows then the under/over estimation is balanced out.

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.

Dist Losses	T10 L24	130.66
Externally Measured HH SPL	T10 L11 x T7 L4 / 1000	0.00

Other Measured HH SPL	$T10 L12 \times T7 L5 / 1000$	0.00
Unmeasured HH SPL	$T10 L10 \times T7 L3 / 1000$	41.15
Measured nonHH SPL	$T10 L11 \times T7 L9 / 1000$	2.13
Unmeasured nonHH SPL	$T10 L10 \times T7 L8 / 1000$	0.85
Void HH SPL	$T10 L13 \times (T7 L7 - T7 L6) / 1000$	2.45
Void nonHH SPL	$T10 L13 \times (T7 L11 - T7 L10) / 1000$	1.07

The calculated SPL using this method is 47.65 MI/d.

The above guidance calculations are however not fully reflective of the nature of SPL dynamics for NI Water. The following table details the formula used in the calculation of each SPL property component specific to NI Water:

Dist Losses	$T10 L24$	130.66
Externally Measured HH SPL	$T10 L11 \times T7 L4 / 1000$	0.00
Other Measured HH SPL	$T10 L12 \times T7 L5 / 1000$	0.00
Unmeasured HH SPL	$T10 L10 \times T7 L3 / 1000$	41.15
Measured nonHH SPL	$T10 L11 \times (T7 L9 + \text{NHH test meters}) / 1000$	2.23
Unmeasured nonHH SPL	$T10 L11 \times T7 L8 / 1000$	0.42
Void HH SPL	$T10 L13 \times (T7 L7 - T7 L6) / 1000$	2.45
Void nonHH SPL	$T10 L13 \times (T7 L12 - (T7 L7 - T7 L6)) / 1000$	0.73

The calculated SPL using this method is 46.98 MI/d.

This differs from the guidance calculations for three of the SPL components:

1. NHH test meters are accounted for in volume within Water Taken Unbilled in the Water Balance. Test meter properties are not billed and are not accounted for in numbers within Table 7 Line 9. Test meters numbers are therefore added to the Table 7 Line 9 figure as these will have the same per property SPL.
2. Unmeasured NHH consumptions are calculated based on their equivalent metered category. Therefore the unmeasured NHH SPL will be the same as the measured NHH SPL.
3. Although NHH test meters are not included in Table 7 Line 9, they are also not classified as a void in Table 7 Line 12. In order to calculate the number of void NHHs the number of void HHs is deducted from the total number of voids in Table 7 Line 12.

Although the guidance for the calculation of Total Leakage is provided, NI Water have calculated Total Leakage by adding Distribution Losses (Line 24) to a total SPL figure of 46.31 MI/d. In doing so SPL has been maintained at a constant value for AIR11 as agreed with NIAUR for the purpose of creating stability for the reporting of company leakage and targeting.

For comparative purposes, the company SPL of 46.31 MI/d would equate to a per property SPL reported in lines 10 to 13 of 61.14 l/p/d & 30.57 l/p/d. This takes into consideration the increase in NI Water properties numbers. A similar approach was agreed with NIAUR for the inclusion of stable data for the specific items of a company Hour day Factor, Service Reservoir leakage and Trunk main leakage.

The company specific hour to day factor for AIR11 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 AIR11 service reservoir and trunk main leakage assessments are the same as those within AIR10. Service reservoir leakage estimated as 4.53 MI/d and trunk mains leakage estimated as 13.66 MI/d.

NI Water feels that the use of a 15% confidence is still appropriate for the MNF Method Leakage in the MLE calculations. This is consistent with the figure used in AIR10. Crowder Consulting carried out an exercise for AIR09 to determine an appropriate confidence limit for MNF method leakage that supports this value.

Line 26 – Distribution Input

The distribution input figure for AIR11 has been calculated as a post MLE figure of 625.15 MI/d. The distribution figure for AIR10 was 623.24 ML/d. The company specific confidence interval for distribution input for AIR11 is 2.13%. This is the same as AIR10.

The method of reporting and calculating the company distribution input figure remains constant with the procedure adopted during AIR09. In addition during the reporting year NI Water has continued with the annual calibration of all DI meters.

At the time of the Freeze Thaw, because of the serious demand issue at that time, two additional sources were brought into operation. One of these, Glarryford, is automatically included in the distribution input calculation. However the other source, Cabragh BH, is not metered and this has been manually included within the DI calculation.

In line with the guidance provided, details of the distribution input for each PPP WTW site is as follows

	pre-MLE (MI/d)	post-MLE (MI/d)
Ballinrees	25.76	25.67
Castor Bay	102.29	101.92
Dunore Point	122.17	121.73
Moyola	16.08	16.02
Total	266.30	265.34

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 73 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 0.52 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 73 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 625.15 ML/d and deducting the cross border exports the volume of water treated at own works to own customers is 624.63 MI/d.

Lines 31 & 32 - Security of Supply

As indicated in AIR10 NI Water is currently developing a water resource management plan which is now in the final stages of development. The security of supply index for AIR11 has been calculated based on this Draft 2010-2035 Water Resource Management Plan (DWRMP).

The DWRMP has adopted the latest methodology for producing water resource management plans. There has been an increase in the reported

SOSI since 2009/10, which was 88, to the reported 97 for 2010/11. This is mainly due to the following reason;

- There is a significant interaction between South and East water resource zones (WRZs). The DWRMP indicates it is likely that circa 20Ml/d from Castor Bay is actually use within the East WRZ. This interaction between South and East WRZs is to be reviewed for the final WRMP. For the purpose of this SOSI calculation a conservative estimate of 10Ml/d has been transferred from the WAFU previously allowed for in South WRZ and is allocated to the East WRZ. This reallocation of WAFU between East and South is believed to be a more accurate reflection of the actual situation on the ground.

There are also a number of other factors that influence the AIR11 SOSI calculation. These include;

- Distribution Input (DI) has increased slightly from 2009/10 to a total of 627.58M/d, up from 625.40M/d. This has been significantly influenced by the increased flow into the distribution system during the freeze/thaw incident experienced throughout Northern Ireland in December 2010 and January 2011. Comparison between the 9 months excluding December to February for 2009-10 and 2010-11 indicates 611.62M/d and 608.82M/d respectively.
- Water Available for Use (WAFU) across Northern Ireland for 2010/11 remains at the same level as 2009/10 at 363.06M/d. This is due to the Strule River abstraction no yet being complete at Derg WTW. WAFU will likely increase when the Strule abstraction is operational.
- Outage allowance for NI Water WTWs remains at 2% as indicated in the DWRMP 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 DWRMP. For the final WRMP this assumption is to be reviewed and may have an influence on future SOSI calculations.

The calculation for AIR11 is believed to be an accurate reflection of the current NI Water SOSI. It is possible that further review for the final WRMP during 2011 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.

Overall Water Balance**Table 1 Water Balance Table**

Water Balance Apr 2010 - Mar 2011						
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	132.41	10%	175.31	8.9%	2.31	134.71
Billed Unmeasured HH	305.72	10%	934.65	47.3%	12.31	318.04
Billed Unmeasured NHH	9.02	15%	1.83	0.1%	0.02	9.04
SPL	46.31					46.31
DSOU	4.64	25%	1.35	0.1%	0.02	4.66
Water Taken Unbilled	27.42	25%	47.00	2.4%	0.62	28.04
Sum of components	601.44					625.15
Distribution Input	627.50	2%	178.64	9.0%	2.35	625.15
Top Down Leakage	194.60					
BU Leakage	168.54	15%	639.13	32.3%	8.42	176.96
Imbalance (mld)	26.06			100.0%		
% Imbalance	4.15%					494.50

The Water Balance produces an overall imbalance of 26.06 MI/d, 4.15%. The imbalance reported for AIR10 was 24.44 MI/d, 3.91%.

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 2011, the confidence grade applied to the NI Water's water balance is B2. The confidence level for the overall water balance for AIR10 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 - [Unmeasured Non-household Water Delivered](#) has a confidence grade of C4 in comparison to the previous value of B4. 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.

Line 26 - Distribution Input has a confidence grade of B2. The sum of components and the distribution input balance to less than 5%. A 2.13% 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 Household Per Capita Consumption (l/head/d)											
Unmeasured Non-Household Water Delivered (l/prop/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	80.48	75.24	24.60	4.70	19.90	23.37%	247.399	0.00%	0.000	
West	79.44	0.00	0.00	74.00	69.17	5.44	4.80	0.64	0.81%	160.639	0.00%	0.000	
Central	11.86	19.00	0.00	29.56	27.64	1.30	1.98	-0.68	2.16%	70.490	4.00%	0.002	
East	146.51	197.00	0.00	332.44	310.85	11.07	19.89	-8.82	2.50%	908.132	50.00%	0.032	
South	70.17	137.00	0.00	155.01	144.68	52.16	13.40	38.76	23.02%	411.820	0.00%	0.000	
Total	363.06	403.00	0.00	671.48	627.58					1798.480		0.033	97

**Table 10a (i) – Non Financial Measures - Security of Supply Index –
Planned level of service**

As indicated in AIR10 NI Water is currently developing a water resource management plan which is now in the final stages of development. The security of supply index for AIR11 has been calculated based on this Draft 2010-2035 Water Resource Management Plan (DWRMP).

The DWRMP has adopted the latest methodology for producing water resource management plans. There has been an increase in the reported SOSI since 2009/10, which was 88, to the reported 97 for 2010/11. This is mainly due to the following reason;

- There is a significant interaction between South and East water resource zones (WRZs). The DWRMP indicates it is likely that circa 20MI/d from Castor Bay is actually use within the East WRZ. This interaction between South and East WRZs is to be reviewed for the final WRMP. For the purpose of this SOSI calculation a conservative estimate of 10MI/d has been transferred from the WAFU previously allowed for in South WRZ and is allocated to the East WRZ. This reallocation of WAFU between East and South is believed to be a more accurate reflection of the actual situation on the ground.

There are also a number of other factors that influence the AIR11 SOSI calculation. These include;

- Distribution Input (DI) has increased slightly from 2009/10 to a total of 627.58Mld, up from 625.40Mld. This has been significantly influenced by the increased flow into the distribution system during the freeze/thaw incident experienced throughout Northern Ireland in December 2010 and January 2011. Comparison between the 9 months excluding December to February for 2009-10 and 2010-11 indicates 611.62MI/d and 608.82MI/d respectively.
- Water Available for Use (WAFU) across Northern Ireland for 2010/11 remains at the same level as 2009/10 at 363.06Mld. This is due to the Strule River abstraction not yet being complete at Derg WTW. WAFU will likely increase when the Strule abstraction is operational.
- Outage allowance for NI Water WTWs remains at 2% as indicated in the DWRMP 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 DWRMP. For the final WRMP this assumption is to be reviewed and may have an influence on future SOSI calculations.

The calculation for AIR11 is believed to be an accurate reflection of the current NI Water SOSI. It is possible that further review for the final WRMP during 2011 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	80.48	75.24	24.60	4.70	19.90	23.37%	247.399	0.00%	0.000	
West	79.44	0.00	0.00	74.00	69.17	5.44	4.80	0.64	0.81%	160.639	0.00%	0.000	
Central	11.86	19.00	0.00	29.56	27.64	1.30	1.98	-0.68	2.16%	70.490	4.00%	0.002	
East	146.51	197.00	0.00	332.44	310.85	11.07	19.89	-8.82	2.50%	908.132	50.00%	0.032	
South	70.17	137.00	0.00	155.01	144.68	52.16	13.40	38.76	23.02%	411.820	0.00%	0.000	
Total	363.06	403.00	0.00	671.48	627.58					1798.480		0.033	97

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

As indicated in AIR10 NI Water is currently developing a water resource management plan which is now in the final stages of development. The security of supply index for AIR11 has been calculated based on this Draft 2010-2035 Water Resource Management Plan (DWRMP).

The DWRMP has adopted the latest methodology for producing water resource management plans. There has been an increase in the reported SOSI since 2009/10, which was 88, to the reported 97 for 2010/11. This is mainly due to the following reason;

- There is a significant interaction between South and East water resource zones (WRZs). The DWRMP indicates it is likely that circa 20Ml/d from Castor Bay is actually use within the East WRZ. This interaction between South and East WRZs is to be reviewed for the final WRMP. For the purpose of this SOSI calculation a conservative estimate of 10Ml/d has been transferred from the WAFU previously allowed for in South WRZ and is allocated to the East WRZ. This reallocation of WAFU between East and South is believed to be a more accurate reflection of the actual situation on the ground.

There are also a number of other factors that influence the AIR11 SOSI calculation. These include;

- Distribution Input (DI) has increased slightly from 2009/10 to a total of 627.58Mld, up from 625.40Mld. This has been significantly influenced by the increased flow into the distribution system during the freeze/thaw incident experienced throughout Northern Ireland in December 2010 and January 2011. Comparison between the 9 months excluding December to February for 2009-10 and 2010-11 indicates 611.62Ml/d and 608.82Ml/d respectively.
- Water Available for Use (WAFU) across Northern Ireland for 2010/11 remains at the same level as 2009/10 at 363.06Mld. This is due to the Strule River abstraction not yet being complete at Derg WTW. WAFU will likely increase when the Strule abstraction is operational.
- Outage allowance for NI Water WTWs remains at 2% as indicated in the DWRMP 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 DWRMP. For the final WRMP this assumption is to be reviewed and may have an influence on future SOSI calculations.

The calculation for AIR11 is believed to be an accurate reflection of the current NI Water SOSI. It is possible that further review for the final WRMP during 2011 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 AIR10 NI Water is currently developing a water resource management plan. The security of supply index has been calculated based on this Draft 2010-2035 Water Resource Management Plan (DWRMP).

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 SOSI calculation for a critical period. However, a critical period review for a freeze/thaw scenario is being carried out for the Final Water Resource Management Plan.

Table 11– Water Service Activities

In AIR10 the Reporter (in Recommendation No 26) recommended ‘A more unified text to improve overall presentation and consistency’. To this end the Asset Management Section (AMS) has co-ordinated the input into this table from a number of sources, and can advise on the compilation of the data in this table, for information not sourced from within AMS.

Line 1 - Total length of mains at April 1

The value of 26435.45km, confidence grade B3, has been extracted from line 12 of the AIR10 Table 11.

Lines 2 - 10 Commentary from Engineering & Procurement

This section provides the commentary on lines 2 – 10 for Engineering & Procurement (EP) which records the amount of maintenance activity carried out in the report year 10/11 on water mains and communication pipes.

2	Mains renewed	km	2	174.49	A1
3	Mains relined	km	2	0.00	A1
4	Mains cleaned (total)	km	2	0.00	A1
6	New mains	km	2	86.84	A1
7	Mains abandoned and other changes	km	2	195.57	A1
8	Lead communication pipes replaced - quality	nr	0	0	A1
9	Lead communication pipes replaced - maintenance or other	nr	0	1282	A1
10	Communication pipes replaced - other	nr	0	2528	A1

NIW intends to replace/rehabilitate approximately 1.27% of the water mains network on an annual basis. This is equivalent to 915 km over the PC10 period of 10/11, 11/12 and 12/13.

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.

All information is compiled from EP contract management information monthly returns. This is an accurate measurement of the actual lengths of water mains laid, renovated or replaced, compiled from contractor’s on-site records. The information is collated from each individual contract on a monthly basis and aggregated into an overall annual figure. The EP data is assessed as confidence grade A1 on the basis of the competency of our long term contracting partners’ understanding of their reporting requirements, the quality and robustness of their on-site measurements and NI Water’s Captrax management system which stores the information and is used to populate the AIR table.

Please note: NI Water has amended its method of reporting for new and renewed mains in lines 2 and 6. This method now complies 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 Lines 2 and 6 on the basis of primary purpose for the activity and is reflected by a decrease in the outputs for mains renewed and new mains (lines 2 & 6).

The latter addresses the AIR10 Reporter's Recommendation i.e. 'Except where the company can demonstrate a replacement main driven by the need for additional hydraulic capacity, lengths contributing to Line 6 should exclude all replacement main and pipe bursting operations should be reported in Line 2.'

Line 4 - Mains cleaned (Total)

EP does not undertake this function as part of construction projects.

Lines 2 - 10 Commentary from Network Water Operations

This section provides the commentary on the following table and lines for Network Water Operations (NWO) which record the amount of maintenance activity carried out in the report year 10/11 on water mains and communication pipes.

2	Mains renewed	km	2	0	B3
3	Mains relined	km	2	0	B3
4	Mains cleaned (total)	km	2	837.41	B3
6	New mains	km	2	34.33	B3
7	Mains abandoned and other changes	km	2	0	B3
8	Lead communication pipes replaced - quality	nr	0	258	B3
9	Lead communication pipes replaced - maintenance or other	nr	0	46	B3
10	Communication pipes replaced - other	nr	0	628	B3

Line 2 - Mains renewed (km)

Data for April 10 – March 11 was collated by Field Managers, confirmed, transferred onto a spreadsheet and sent to the Clean Water Business Unit who collate the data for the annual reporting period. Engineering Procurement is the primary contributor to this information. **Confidence Grade B3.**

Future Reporting

For AIR12 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Line 3 - Mains relined (km)

At present this operation is not carried out by Networks Water

Line 4 - Mains cleaned (km)

Detailed data for reporting period was collated by Field Managers using system reports which when checked and confirmed were transferred onto a spreadsheet and sent to the Clean Water Business Unit who collate the data

for the annual reporting period. As directed by the Regulator repeat flushing of the same length of main has been discounted hence the notable reduction in the length of distribution network flushed as compared to last year.

The recorded units are the total number of reactive fire hydrant flushing jobs plus the count of flushing MST's on the Ellipse system which is then converted from units to km using the factor of 0.156.

2011 information return is:

5368 no. flushings x 0.156km = 837.41 kms. This comprises 2264 flushing MST's and 3104 reactive flushing jobs.

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.
Confidence Grade B3.

As per previous audit recommendations the number of flushings have been converted to km. The number of flushings have been captured for March 10 – April 11 year using base information from MWM and then converted to km using the factor of 0.156

Future Reporting

For AIR12 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Line 6 - New mains (km)

Data for the period April 10 – March 11 was collated by Field Managers using system reports which when checked and confirmed were transferred onto a spreadsheet and sent to the Clean Water Business Unit who collate the data for the annual reporting period. This figure primarily includes data for new mains laid in new housing developments throughout the year. Networks Water is the sole contributor for new main laid in new housing developments. Engineering Procurement is the primary contributor for new mains (replacement upsizing). **Confidence Grade B3.**

Future Reporting

For AIR12 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Line 7 - Mains abandoned and other changes (km)

Data for the period March 10 - April11 was collated by Field Managers, confirmed, transferred onto a spreadsheet and sent to the Clean Water Business Unit who collate the data for the annual reporting period. Engineering Procurement is the primary contributor to this information.
Confidence Grade B3.

Future Reporting

For AIR12 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Line 8 - Lead communication pipes replaced – quality

Data for the reporting period March 10 – April 11 was collated by Field Managers using system reports which when checked and confirmed were transferred onto a spreadsheet and sent to the Clean Water Business Unit who collate the data for the annual reporting period. **Confidence Grade B3**

Future Reporting

For AIR12 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Line 9 - Lead communication pipes replaced – maintenance/other

Data for the reporting period was collated by Field Managers using system reports which when checked and confirmed were transferred onto a spreadsheet and sent to the Clean Water Business Unit who collate the data for the annual reporting period. April 10 – March 11. **Confidence Grade B3.**

Future Reporting

For AIR12 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Line 10 - Communication pipes replaced – other

Data for the reporting period was collated by Field Managers using system reports which when checked and confirmed were transferred onto a spreadsheet and sent to the Clean Water Business Unit who collate the data for the annual reporting period. **Confidence Grade B3.**

Future Reporting

For AIR12 Networks Water will continue to use the established process for monthly reporting using MWM as a source for base information.

Lines 2, 3, 4, 6, 7, 8, 9 & 10 Commentary from Asset Management Section

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, 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 (No29) 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 confidence grades for lines 2, 3 and 7 remain as A1 as proposed by EP, as these lines are not relevant to Networks Water Operations or they have zero as a return.

The confidence grades for lines 4 and 8 remain as proposed by Networks Water Operations i.e. B3, as these lines are not relevant to EP or they have zero as a return. The AIR10 Reporter's Recommendation (No29) stated that line 8 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 confidence grade for line 6 has been proposed as B2 as:

1. The EP confidence grade for this line was A1, and that from Networks Water Operations was B3; and
2. The proportion of the data, from Networks Water Operations, for this line amounts to 29% of the total value populated.

The Reporter 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 AIR11.

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 10 – March 11 was collated by Field Managers using system reports which when checked and confirmed were transferred onto a spreadsheet and sent to the Clean Water Business Unit who collate and review the data for the annual reporting period.

A number of Mains Burst Repairs was provided by Leakage Function for the period 1st April 2010 – 9th May 2010 prior to internal restructuring. A number of Repairs attributable to third party damage has also been extracted from the final total. The totals for Networks Water were then converted from units to bursts per 1000km.

Calculation of Mains Bursts per 1000kms

Total Burst Mains divided by Total length of mains multiplied by 1000
 $3,667 - 33 \text{ (rechargeables)} / 26,441.81\text{km} = 0.139 \times 1000 = 137.43$

Total Bursts per 1000km = 137.43

2008 information return was 3,611
 2009 information return was 3,764
 2010 information return was 3,910

Proportion of Bursts within Line 11 detected by Proactive Methods.

The total number of Mains Repairs carried out by NIW was 3,667 (including 33no. due to third party damage).

The number of Mains Repairs carried out by Networks Water Function was 2,573.

The number of Mains Repairs carried out due to proactive Leakage Detection methods was 1,094. (This includes 121no. as submitted by Leakage Function for the period 1st April 2010 - 9th May 2010).

Confidence Grade B3

The number of bursts for Networks Water have been captured for the complete year using base information from MWM plus information captured by the Leakage function.

Future Reporting

For AIR12 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 26441.81km has been extracted from NI Water digital data which is held in the Asset Mapper GIS.

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 i.e. B3. There have been no significant improvements in data quality since the AIR10 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. There were no specific recommendations from the reporter for this line following last year's submission.

Summation of lines 1, 2 and 6 less 7 (on Table 11) will not equate to the figure entered for line 12, due to the fact that information may be pending for uploading onto Asset Mapper GIS.

Lines 13 - 17

This section provides the commentary for lines 13 - 17 for Asset Performance which record the activity carried out in the report year 10/11 on Distribution Studies.

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 held on the following spreadsheet.

60 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 2011)

Zone	Area	Start Date	Completion Date	AIR11 Population
Craigavon West	SE	11/11/99	Aug-01	21647
B'mena Borough	NW	20/04/00	Dec-02	28296
Silent Valley	SE	16/07/01	Jan-Mar 2004	3475
Fofanny Newry	SE	16/07/01	Jan-Mar 2004	51571
Camlough	SE	10/10/01	Jan-Mar 2004	14682
Ballinrees West	NW	07/01/02	Apr-Jun 2003	16887
Breda South	SE	20/03/01	Oct-02	38154
Cityside	NW	09/08/00	Oct-04	57918
Castor Bay/Armagh	NW	18/12/02	Feb-06	16168
Seagahan	NW	18/12/02	Feb-06	31900
Clay Lake	NW	18/12/02	Feb-06	6730
Ards North	SE	24/06/03	Nov-05	27962
Lough Cowey	SE	24/06/03	Nov-05	9577
Bangor Outer	SE	24/06/03	Nov-05	44100
Castor Bay/M'liskmisk	SE	19/11/03	Nov-05	16607
Altnahinch	NW	04/06/01	Feb-03	31155
Drumabest	NW	05/06/01	Feb-03	13342
Ballinrees East	NW	07/01/02	Apr-Jun 2003	23057
Ballinrees Central	NW	07/01/02	Apr-Jun 2003	25794
Dungonnell	NW	30/05/01	Jan-05	37234
North Tyrone	NW	10/05/01	May-Jun 2006	29868
South West	NW	10/05/01	May-Jun 2006	13557
Tardree	NW	04/09/03	Mar-09	10558
Dunore West	NW	04/09/03	Mar-09	44109
Lough Fea	NW	23/04/01	Dec-07	29863
Castlereagh	SE	19/05/02	Nov-07	25866
Purdysburn East	SE	19/05/02	Nov-07	31866
Castor Bay Shanmoy	NW	12/11/02	Dec-09	22075
Altmore/Gortlenaghan	NW	12/11/02	Dec-09	11533
Newtownards Town	SE	02/11/04	Dec-07	32424
Ballintemple	SE	02/07/02	Apr-09	15528
Lough Ross	SE	02/07/02	Apr-09	10472
Fofanny B'bridge	SE	05/04/01	Dec-07	19172
Castor Bay/Banbridge	SE	05/04/01	Dec-07	30318
Carmony East	NW	04/07/01	Mar-08	16578
Waterside	NW	04/07/01	Mar-08	25464
Moyola	NW	01/10/01	Aug-09	40609
Lisburn Town	SE	29/04/03	Jan-08	41020
Lisburn Rural	SE	29/04/03	Jan-08	10322
Mid Down	SE	02/11/04	Feb-09	29381
Ballygowan	SE	02/11/04	Feb-09	6414
Comber	SE	02/11/04	Feb-09	13020
Craigavon North	SE	19/11/03	Feb-08	35468
Craigavon South	SE	19/11/03	Feb-08	21028
Limavady	NW	19/05/04	Sep-08	30920
North East	NW	19/05/04	Sep-08	4211
South	NW	06/01/2008	Mar-12	20804

Zone	Area	Start Date	Completion Date	AIR11 Population
South East	NW	06/01/2008	Mar-12	14209
N Down/Bangor	SE	01/04/06	Jan-08	31660
South Down	SE	15/06/07	Mar-09	15742
Downpatrick	SE	15/06/07	Mar-09	8356
Newcastle	SE	15/06/07	Mar-09	10169
Mourne Coastal	SE	15/06/07	Mar-09	12459
Breda North	SE	22/02/08	Oct-09	53606
Belfast East	SE	22/02/08	Oct-09	37330
Hollywood	SE	22/02/08	Oct-09	8368
Dunmurry	SE	Jul-08	Jun-11	34978
Lisburn South Rural	SE	Jul-08	Jun-11	20372
Ballywonard/Dunanney	SE	Jun-08	Jun-10	39102
Ballysillan/Ballyaghagan	SE	Jun-08	Jun-10	33865
West Belfast rural	SE	Jun-08	Jun-10	10244
Omagh	NW	Jul-08	Mar-12	39199
Dunore East	NW	Jun-09	Jun-11	20820
Killylane	NW	Jun-09	Jun-11	32595
Lough Mourne	SE	05/02/09	Sep-10	7611
Carrickfergus	SE	05/02/09	Sep-10	38113
Newtownabbey	SE	05/02/09	Sep-10	34876
Whiterock	SE	Jun-09	Jun-11	32807
B'gomartin/P'burn West	SE	Jun-09	Jun-11	33745
Oldpark	SE	Jun-09	Jun-11	64453
Ballygomartin North	SE	Jun-09	Jun-11	29517
KEY				
Started/finished	60	Studies completed population		1459401
Started/ongoing	11	N Ireland population		1802900
Programmed to start	0			
Remaining zones to start	0	Percentage Complete		80.9%

Line 14 - Distribution zone studies ongoing

The number of zonal studies ongoing, 11 no., is taken from the above Table as held and updated by the Project Management team

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 (60 no.) compared to the number of zones to be studied (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 80.9% accounts for updated studies up to 31st March 2011.

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

The completion of three trunk mains schemes and the commencement of construction of a fourth scheme were included in the PC10 FD Annex N1 02.00 document.

The Cross Town Link in Belfast was completed during the year and the Castor Bay to Dungannon trunk main is substantially complete and will be in service very early in the 11/12 year

The completion of the Cross Town Link removed a number of risks to supply including Water Quality risks, Water Balance risks and Operational Supply risks.

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

This represents the delivery of the PC10 nominated outputs at Carmoney WTW and Lough Bradan WwTW.

This represents the completion within the baseline financial year of the PC10 scope of these projects. The Carmoney 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.

The confidence grades for this line were determined using the reporting guidance and were assessed as A1 – based on the evidence within the methodology.

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

In the PC10 Business Plan, NI Water included the completion or start of construction on upgrades to eight service reservoirs and five clear water tanks. Seven schemes involve the completion of work begun in the SPB period

Construction of the Dungonnell and Altnahinch Command Reservoirs is complete in addition to Glenlough, Tullaghans and Crewe Hill Service Reservoirs with Carland and Ballykine Service Reservoirs on programme for completion in early 2011/12.

The completion of these reservoirs will increase the security of supply, increase Water Quality and smooth out short term disruptions to supply from interruptions to pumps or maintenance of treatment works.

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	5		36.15	A3
2 95%ile less than 0.5NTU	19		324.87	A3
3 Turbidity not recorded	2		1.21	A1
4 Total	26		362.23	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.

The turbidity compliance at WTWs has improved in 2010 with 29 exceedances of the limit in 2010, compared to 39 in the equivalent period in 2009.

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. This led to the exclusion of 2 sites which were put out of service during the reporting period, with 24 other NI Water sites reported on. These 2 sites have been included in the report on line 3 “Turbidity not recorded”.
- In addition to the 26 NI Water sites, the 5 PPP sites have been reported on separately in their own table.
- In its Drinking Water Quality Report for 2010, NI Water will be reporting overall on 31 sites.

2010 WTW Excluded from calculations

Site Code	Site Name	Reason
W1310	Glarryford Borehole	Out of service at year end
W2517	Cabragh/Gortlenaghan at Cabragh	Out of service at year end
2 Sites		

2010 NIW WTW Included in calculations

WTW Code	WTW Name	MI/d	95 %ile	>= 0.5NTU	MI/d >= 0.5	MI/d < 0.5
W1302	Lough Fea	11.75	0.3	0		11.75
W1303	Dungonnell	8.25	0.2	0		8.25
W1501	Killylane	9.07	0.4	0		9.07
W1702	Altnahinch	8.91	0.2	0		8.91
W1706	Rathlin Borehole	0.07	0.85	1	0.07	
W2501	Altmore	3.66	0.6	1	3.66	
W2509	Clay Lake	4.25	0.2	0		4.25
W2512	Gortlenaghan Borewell	0.95	2.95	1	0.95	
W2514	Seagahan	10.97	0.2	0		10.97
W2516	Shanmoy Borewell at Mullaghanagh	1.96	0.3	0		1.96
W2706	Camlough	4.13	0.97	1	4.13	
W2801	Fofanny (New works)	39.50	0.3	0		39.50
W2802	Carran Hill (New works)	6.54	0.3	0		6.54
W3317	Dorisland	26.32	0.3	0		26.32
W3801	Drumaroad	115.07	0.3	0		115.07
W4301	Carmoney	20.73	0.4	0		20.73
W4306	Caugh Hill	19.45	0.3	0		19.45
W4501	Derg	14.74	0.2	0		14.74
W4513	Lough Bradan	8.90	0.475	0		8.90
W4523	Lough Macrory	12.12	0.3	0		12.12
W4541	Glenhordial	4.18	0.3	0		4.18
W4542	Lenamore Springs	0.42	0.345	0		0.42
W4701	Killyhevlin	27.34	0.5	1	27.34	27.34
W4722	Belleek	1.72	0.2	0		1.72
24 Sites	Overall DI Input	362.23				

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS - (NIW Only)**

DESCRIPTION	UNITS	DP	1	2	3	4	CG
			NR OF SOURCES	PROP'N DIST INPUT	BULK PROP'N OF D.I.	REPORT YEAR 2010-11	
A SOURCE TYPES AND PUMPING							
1 Impounding reservoirs			14	0.781			B2
2 River abstractions			6	0.209			B2
3 Boreholes			5	0.010			B2
4 Source types and pumping; total			25	1.000			B2
5 Average pumping head - total	m.hd	1				84.1	B4
			TOTAL PROP'N OF D.I.		TOTAL NR OF WORKS		
B TREATMENT TYPE							
6 Proportion of distribution input - simple disinfection			0.010	4			
7 Proportion of distribution input - W1			0.000	0			
8 Proportion of distribution input - W2			0.000	1			
9 Proportion of distribution input - W3			0.578	10			
10 Proportion of distribution input - W4			0.412	10			
11 Proportion of distribution input - total			1.000				
12 Total numbers of works				25			
			BAND 1	BAND 2	BAND 3	BAND 4	
			<= 165mm	166 - 320mm	321 - 625mm	> 625mm	
C POTABLE MAINS							
13 Potable mains (nominal bore)	km	2	21021.32	3945.04	1261.80	213.65	

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS (PPP Only)**

DESCRIPTION	UNITS	DP
A SOURCE TYPES AND PUMPING		
1 Impounding reservoirs		
2 River abstractions		
3 Boreholes		
4 Source types and pumping; total		
5 Average pumping head - total	m.hd	1

1		2		3		4	
NR OF SOURCES		PROP'N DIST INPUT		BULK PROP'N OF DI		REPORT YEAR 2010-11	
UNITS	DP	UNITS	DP	UNITS	DP	CG	
nr	0	Prop'n (0-1)	3	Prop'n (0-1)	3		
1		0.097					B2
3		0.903					B2
0		0.000					B2
4		1.000					B2
						77.8	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

TOTAL PROP'N OF D.I.		TOTAL NR OF WORKS	
UNITS	DP	UNITS	DP
Prop'n (0-1)	3	nr	0
0.000		0	
0.000		0	
0.000		0	
0.000		0	
1.000		4	
1.000		4	

BAND 1	BAND 2	BAND 3	BAND 4
<= 165mm	166 - 320mm	321 - 625mm	> 625mm

C	POTABLE MAINS	UNITS	DP
13	Potable mains (nominal bore)	km	2

0.00	0.00	16.42	0.00
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NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 12 NON FINANCIAL MEASURES
WATER EXPLANATORY FACTORS - (Total)**

DESCRIPTION	UNITS	DP	1	2	3	4	CG
			NR OF SOURCES	PROP'N DIST INPUT	BULK PROP'N OF DI	REPORT YEAR 2010-11	
A SOURCE TYPES AND PUMPING							
1	Impounding reservoirs		15	0.490			B2
2	River abstractions		9	0.504			B2
3	Boreholes		5	0.006			B2
4	Source types and pumping; total		29	1			B2
5	Average pumping head - total	m.hd				161.8	B4
			TOTAL PROP'N OF D.I.		TOTAL NR OF WORKS		
B TREATMENT TYPE							
6	Proportion of distribution input - simple disinfection		0.006	4			
7	Proportion of distribution input - W1		0.000	0			
8	Proportion of distribution input - W2		0.000	1			
9	Proportion of distribution input - W3		0.333	10			
10	Proportion of distribution input - W4		0.661	14			
11	Proportion of distribution input - total		1.000				
12	Total numbers of works			29			
			BAND 1	BAND 2	BAND 3	BAND 4	
			<= 165mm	166 - 320mm	321 - 625mm	> 625mm	
C POTABLE MAINS							
13	Potable mains (nominal bore)	km	21021.32	3945.04	1278.22	213.65	

Table 12 – Water Explanatory Factors

The Reporter has previously recommended consolidation of Table 12 commentaries to improve visibility and avoid possible conflicts, to this end the Asset Management Section (AMS) has co-ordinated the input into this table from a number of sources, and can advise on the compilation of the data in this table, for information not sourced from within AMS.

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 AIR11 period, and those in service on 31st March 2011. The status of the latter for the AIR10 period is also shown.

Location	Source Type	Treatment Type	In Service during AIR10 Period	In Service at 31 st March 2010	In Service during AIR 11 Period	In Service at 31 st March 2011
Gortlenaghan	Borehole	SD	Yes	Yes	Yes	Yes
Shanmoy BHs	Borehole	SD	Yes	Yes	Yes	Yes
Lenamore Spring	Borehole	SD	Yes	Yes	Yes	Yes
Brishley	Borehole	SD	Yes	No	No	No
Stradreagh Springs	Borehole	SD	Yes	No	No	No
Rathlin	Borehole	SD	Yes	Yes	Yes	Yes
Buckna-decommissioned 1st Apr 2010	Borehole	W2	No	No	No	No
Alcrossagh	Borehole	W2	Yes	Yes	No	No
Glarryford	Borehole	W2	Yes	Yes	Yes	No
Drumabest - - was decommissioned in Jan 2009 - but brought back into service during AIR10	Borehole	W2	Yes	No	No	No
Cabragh	Borehole	SD	No	No	Yes	No
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	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Drumaroad	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Caugh Hill	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Glenhordial	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Lough Bradan	Imp.	W3 in	Yes	Yes	Yes	Yes

Location	Source Type	Treatment Type	In Service during AIR10 Period	In Service at 31 st March 2010	In Service during AIR 11 Period	In Service at 31 st March 2011
	Reservoir	AIR10, W4 for AIR11				
Altmore	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Dorisland	Imp. Reservoir	W3	Yes	Yes	Yes	Yes
Lough Macrory	Imp. Reservoir	W4	Yes	Yes	Yes	Yes
Clay Lake	Imp. Reservoir	W4	Yes	Yes	Yes	Yes
Fofanny	Imp. Reservoir	W4	Yes	Yes	Yes	Yes
Seagahan	Imp. Reservoir	W4	Yes	Yes	Yes	Yes
Creightons Green - was decommissioned in March 2009, but brought back into service during AIR10	Imp. Reservoir	W3	Yes	No	No	No
Camlough	Lough	W4	Yes	Yes	Yes	Yes
Killyhevin	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
Total			30	26	26	24

On 31st March 2010 the Supply Function had 26 NR Sources in-Service consisting of 14 NR Impounding Res., 6 NR River/Lough Abstraction & 6NR BH Sources. Alcrossagh and Glarryford Boreholes were decommissioned on 31st March 2010, commencing the AIR11 period with 24 sources in-service. Glarryford and Cabragh BH were temporarily brought back into service during the Freeze/Thaw event during Dec 2010 and Jan 2011. ***This action brought the total number of NIW sources in service during the AIR11 period up to a maximum of 26. It must be noted that the completed AIR11 Table 12 reports 25 sources in-service, with Cabragh BH being excluded. As Table 12 reports the sources against the distribution input Cabragh has not been included as it has not been included on the Water Supply Distribution Input table, as it has been mothballed for several years and has no automatic meter on site.***

In summary although NIW has reported 25 sources on Table 12 it is recognised that NIW had a total of 26 sources in-service during AIR11. NIW had 24 sources in-service on 31st March 2011.

The source type's totals in service for part or all of AIR11 include: - boreholes (6nr including Cabragh BH), impounding reservoirs (14 nr), and rivers & loughs (6 nr).

The treatment type totals in service for part or all of AR11 include - simple disinfection (5 nr, including Cabragh BH), W1 (0 nr), W2 (1 nr), W3 (10 nr) & W4 (10 nr).

Note that Lough Bradan has been categorised as a W4 for AIR11 reporting, due to the introduction of GAC Filters in Feb 2011. This source had been categorised as a W3 for AIR10.

Notes from Water Supply regarding changes during the AIR 11 period.

31st March 2010 Alcrossagh BH Decommissioned No Flow During AR11 (BH & W2)

31st March 2010 Glarryford BH taken O.O.S. (BH & W2)

Dec 2010 (29th) Glarryford (BH & W2) Temporarily Re-Introduced during Freeze/Thaw

Dec 2010 (28th) Cabragh (BH & SD) Temporarily Re-Introduced during Freeze/Thaw

Jan (8th) 2011 Glarryford BH (BH & W2) taken O.O.S.

Jan (13th) 2011 Cabragh BH (BH & SD) taken O.O.S.

Feb 2011 Lough Bradan Upgraded to Treatment W4 with the introduction of GAC Filters

The AIR10 Reporter's Recommendation stated 'Clearly define and list the numbers of decommissioned sites that are wholly abandoned or capable of being brought back into service at reasonable notice.' As an action to the latter, Water Supply Business Unit in conjunction with Plant Managers produced a list of all BH & WTWs owned by NIW that were currently not in service, to depict whether each site is "abandoned" or "capable of being brought back into service at reasonable notice".

Table listing Boreholes which are abandoned and those which are capable of being brought into service at reasonable notice

CAR BHs March 2011	CAR ID (Facility)	STATUS
Alcrossagh 1 & 2	BH000104105 & BH000104106	ABANDONED
Augher	BH000104060	ABANDONED
Ballycullen 3 & 4	BH000104061 & BH000104062	ABANDONED
Ballymena Golf Course	BH000104095	ABANDONED
Balmoral	BH000104084	ABANDONED
Bellaghy 1,2,&3	BH000104100,BH000104096 & BH000104103	ABANDONED
Belsize Road	BH000104067	ABANDONED
Bolea	BH000104051	ABANDONED
Brishey	BH000104053	ABANDONED
Buckna 1,2 & 3	BH000104099,BH000104098 & BH000104101	ABANDONED
Comber Deep Borehole	BH000104088	ABANDONED
Cabragh BH	BH000104046	Capable of being brought into service at reasonable notice
Derriaghy	BH000104073	ABANDONED
Derrylin 1 & 2	BH000104056 & BH000104055	ABANDONED
Drumabest 1,2,3,4 & 5	BH000104104,BH000104107,BH00010410 ,BH000104108 & BH000104109	ABANDONED
Edmondson 1,2 & 3	BH000104094,BH000104087 & BH000104090,	ABANDONED
Favour Royal 1 & 2	BH000104049 & BH000104050	ABANDONED
Gilliland	BH000104086	ABANDONED
Glarryford	BH000104097	Capable of being brought into service at reasonable notice
Glenburn A & B	BH000104064 & BH000104065	ABANDONED
Gortgarn	BH000104052	ABANDONED
Hullstown	BH000104078	ABANDONED
IDB Borehole	BH000104063	ABANDONED
Killycreen	BH000104102	ABANDONED
Kilwee	BH000104071	ABANDONED
Larkfield	BH000104068	ABANDONED
Lester Dam A & B	BH000104085 & BH000104082	ABANDONED
Lisburn 1,2 & 4	BH000104076,BH000104075 & BH000104074	ABANDONED
McAlpine 1 & 2	BH000104093 & BH000104092	ABANDONED
Murdocks Deep & Shallow	BH000104091 & BH000104089	ABANDONED
Newforge	BH000104083	ABANDONED
Newtownstewart	BH000104057	ABANDONED
Oldpark & Oldpark 1	BH000104080 & BH000104079	ABANDONED
Stradreagh (Spring)	N/A	ABANDONED
Stewartstown Road 1 & 2	BH000104072 & BH000104069	ABANDONED
The Hollow B	BH000104070	ABANDONED
TOTALS		
		34 BHs ABANDONED
		2 BHs Capable of being brought into service at reasonable notice

Table listing WTWs which are abandoned

CAR WTWs March 2011	CAR ID (Facility)	STATUS
Ballinamallard	TW000983994	ABANDONED
Ballintemple	TW000984019	ABANDONED
Ballycullen	TW000984009	ABANDONED
Ballydoolagh	TW000983979	ABANDONED
Ballysallagh	TW000984007	ABANDONED
Banagher Orig	TW000983975	ABANDONED
Boomers 1 & 2	TW000984012 & TW000984011	ABANDONED
Carran Hill Original	TW000984018	ABANDONED (Demolished)
Conlig Old Works	TW000984008	ABANDONED
Creightons Green	TW002629805	ABANDONED
Derg (WTW Original)	TW000983998	ABANDONED
Derrykeeghan Abandoned	TW000983982	ABANDONED
Dunaghy Ballymoney	TW000984041	ABANDONED
Fofannybane Original	TW000984024	ABANDONED
Forked Bridge	TW000984026	ABANDONED
Killea 1 & 2	TW000983976 & TW000983972	ABANDONED
Lough Bradan (WTW Original)	TW000983996	ABANDONED
Lough Cowey	TW000984006	ABANDONED
Lough Macrory Orig	TW000984001	ABANDONED (Demolished)
Lough Mourne	TW000984020	ABANDONED
Oaklands Broughshane	TW000984029	ABANDONED
Rathlin Island Abandoned	TW000984036	ABANDONED
Totals		22 No WTWs Abandoned

Lines 1 - 4 and 6 - 11 - Distribution Input

The initial figure that Leakage Section has provided for Distribution Input is 627.56 MI/d against the individual impounding reservoirs, river abstractions and borehole sources, as identified by Water Supply Section. As this calculation is derived from the automatic export of data into a standard spreadsheet this does not take into account tankering occurrences during the freeze thaw event or the introduction of Cabragh BH. On undertaking the necessary adjustments i.e. import/export between resource zones this provides a nett DI value of 627.50 MI/day.

The Distribution Input 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 627.56 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 627.56 MI/d Distribution Input, with sources (NIW and PPP) as listed below, with associated DIs.

Supply Source	Average DI (ML/d)
Ballinrees	25.76
Rathlin	0.07
<i>Alcrossagh</i>	<i>0</i>
<i>Drumabest</i>	<i>0.01</i>
Altnahinch	8.68
Glarryford	0.15
Dungonnell	8.49
Killylane	9.48
Moyola	16.08
Lough Fea	11.56
Caugh Hill	20.21
Carmony	20.51
Lenamore	0.4
Lough Macrory	11.91
Derg	14.98
Glenhordial	4.26
Lough Braden	8.59
Belleek	1.73
Killyhevin	27.67
Altmore	3.64
Gortlen	1.01

Supply Source	Average DI (ML/d)
Shanmoy	1.98
Seagahan	10.81
Clay Lake	4.16
Castor Bay	102.29
Carron Hill	6.44
Camlough	4.28
New Fofanny	39.47
Dunore	122.17
Drumaroad	114.79
Creightons Green	0
Dorisland	25.99
Total DI	627.56

The detailed DI information from Leakage indicates DI against Alcrossagh and Drumabest Boreholes. However these sources were not in operation during the AIR11 period, and any readings against them are recognised as being spurious. ***These sources have not been included in the reporting of AIR11 Table 12.*** Leakage report daily on their associated meters because these types of sites may be reintroduced in the event of a major incident or drought.

AMS has computed the proportional DI for NIW sources, PPP sources and 'total', using a dedicated calculation spreadsheet.

The confidence grade of the resultant data is governed by that of the DI figure from Leakage, hence B2.

As stated above, Cabragh BH was re-introduced into service during the Freeze/Thaw event during Dec 2010 and Jan 2011. However due to the fact that no automatic meter exists on site the DI from it has not been included in the overall DI of 627.56 ML/d. ***Hence Cabragh BH has not been included in the detail behind AIR11 Table 12.*** Water Supply has estimated DI values of 0.41 and 0.46 ML/d respectively for Dec 2010 and Jan 2011.

Average Pumping Head

Introduction

Efforts for the AIR11 Average Pumping Head calculation continue to centre on using completed Detailed Zonal Study (DZS) area data. This now includes data from the studies within the Antrim/Larne Water Resource Zone (WRZ) which have become available since AIR10 and are now included in the calculation.

Distribution Pump Data in Master Pump Table

The Average Pumping Head for NIW has been determined using distribution pump data collected from 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. Calibrated network model data / field test data is now available for all areas of Northern Ireland.

Additional zones comprising of;

- Killylane,
- Dunore East.

have been completed to Calibrated Network Model stage since AIR10 and data has now been included in the Master Pump Table. These zones have also been incorporated into the Average Pumping Head calculation for AIR11. Omagh, South East, South, Dunmurry and Lisburn Rural South area were included in the Average Pumping Head calculation for AIR10, though the information was based on field test data. Dunmurry and Lisburn Rural South have progressed to calibrated network model stage with the data now included in the Master Pump Table and incorporated into the AIR11 Average Pumping Head calculation. Omagh, South and South East remain as field test data with no change from AIR10.

Field Managers have identified installations that operational status has changed from AIR10. These are:-

- Raleigh Corner (taken out of service October 2010)
- St Andrews (taken out of service August 2010)
- Glenavy WBS (due to rezoning was not in service during AIR11 reporting year)
- Craigmore Randalstown (out of service during AIR11 reporting year)
- Tannaghmore Randalstown (out of service during AIR11 reporting year)

Data for Raleigh Corner, which represents the pumped flow during the time in service, has been obtained from Teleweb. It has not been possible to obtain data that accurately reflects the pumped flow for the reporting period for St Andrews and has been removed from the Average Pumping Head calculation. Glenavy WBS, Craigmore and Tannaghmore have been removed from the calculation.

Aside from the above changes, there have been no further updates to the distribution pump data obtained from the DZSC's for completed zonal study areas. The models, and hence data from the models, still represent the best data available for these areas.

Where calculated mean lift and average ADD flow cannot be obtained from a suitable network model or where flow and pressure data from field test installations is missing, 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 AIR10.

Name	AIR10 Flow	AIR10 Lift	AIR11 Flow	AIR11 Lift	Source
Raleigh Corner	0.27	41.35	0.1854	41.35	Field Manager, Telemweb
St Andrews	5.081	34.818	not reported	not reported	Field Manager, Telemweb, DZSC
Glenavy WBS	0.715	10.78	not reported	not reported	Field Manager
Craigmore Randalstown	0.029	31.3	not reported	not reported	Field Manager
Tannaghmore Randalstown	0.23	48.3	not reported	not reported	Field Manager
Cross Hill	N/A	N/A	0.610	117.739	DZSC
Ballybracken	N/A	N/A	0.377	73.391	DZSC
Braepark Rd	N/A	N/A	0.02	69.735	DZSC
Craiganee	N/A	N/A	0.01	19.017	DZSC
Isle Of Glass	N/A	N/A	0.054	27.302	DZSC
Mullaghsandall Lwr	N/A	N/A	0.008	30.812	DZSC
Tildarg Rd	N/A	N/A	0.016	16.714	DZSC
Upp Ballyboley WPS	N/A	N/A	0.02	49.391	DZSC
Poleglass	3.905	47.585	3.6	47.3	DZSC
Ballykine Chestnut Rd	2.493	36.587	2.602	36.501	DZSC
Drumalig Rd Carricknaveagh	0.024	36.946	0.024	39.228	DZSC
Mullaghdrin	0.352	67.647	0.36	65.594	DZSC
Dromara Rd, Hillsborough	0.096	45.293	0.096	51.218	DZSC

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 W 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 Data Monitoring System (TDMS),
- Direct readings of dials from pump sites,
- Record Drawings for pump lift,
- NIW Total Flow Calculations for WTW in NI.

Supply pump data collection for AIR11 focused on where changes to the network have been put into effect since AIR10. There are two main changes to supply data from AIR10. The first is where boreholes have been taken out of service. The boreholes in question are: -

- Glarryford Bellaghy, and
- Glarryford WTW Glarryford,

though it should be noted that these along with Cabragh were temporarily re-introduced during the Freeze/Thaw event. Because of the very limited use over the reporting period and the insignificant impact on the calculation, data for the Glarryford and Cabragh boreholes have been excluded.

The second is with data now available from the two DZS for the Antrim/Larne area. This has allowed all of the pumped flow from Dunore WTW to be included in the calculation for the first time. No other update to the data was obtained on lift and flow for pumps within Supply for inclusion in the AIR11 return (data used remains unchanged from AIR10 return except as mentioned above).

Data is available for all supply pumps in Northern Ireland; however, all supply pumping requires matching to the distribution pumping fed by it to allow division by the distribution input for that area.

The table below lists updates/changes to Supply pump data from AIR10.

Name	AIR10 Flow	AIR10 Lift	AIR11 Flow	AIR11 Lift
Rathlin	0.08	90	0.07	90
Glarryford Bellaghy BH	2.95	35.5	not reported	not reported
Glarryford WTW Glarryford BH	2.15	16	not reported	not reported
Gortlenaghan	1.5	118	1.01	118
Shanmoy	2.5	90	1.98	90

Distribution Input

For the first time the NIW DI is being used in its entirety in the calculation. This is a result of the data from Killylane/Dunore East DZS been available.

Distribution Input used in Average Pumping Head Calculation

DI Used in APH Calculation as % of Total	2008 Return		2009 Return		2010 Return		2011 Return	
Total DI (from NIW Total Flows 2007 - 2008)	616.575							
Resource Zone DI Apr 08 to Mar 09			633					
Resource Zone DI Apr 09 to Mar 10					625.4			
Resource Zone DI Apr 10 to Mar 11							627.5	
DI Used in Calculation	284.459	46.14%	420.93	66.5%	609.62	97.48%	627.5	100%

The above table details DI used in the calculation. With data now available from Dunore East and Killylane DZS, the total DI figure has been used for the first time.

PPP Pump Data in Master Pump Table

As mentioned above in the Supply data section, abstraction pumps, treatment process pumps and WTW outlet pumps have not generally been included in the DZS network models. As a result, in previous years, supply personnel responsible for the installation have provided data from a variety sources. For AIR 11 a request was forward to PPP Contracts Management Section if more up to date/accurate pump data could be provided.

The PPP contractor has provided updated flow and lift data for all installations they are responsible for plus data on six additional installations that have not

previously been reported on. Five of these additional pumping stations are interstage pumps located within water treatment works, the sixth is an abstraction site but was not in service during the reporting year.

This data is now included in the Master Pump Table and incorporated into the AIR11 Average Pumping Head calculation.

The table below lists updates/changes to PPP pump data from AIR10.

Name	AIR10 Flow	AIR10 Lift	AIR11 Flow	AIR11 Lift	Source
Crewe Hill	2	70	2	76.5	PPP
Castor Bay LL	105	18	117	24	PPP
Castor Bay Interstage 1	N/A	N/A	117	7.3	PPP
Castor Bay Interstage 2	N/A	N/A	117	10.8	PPP
Castor Bay HL-B'dougan	80	92	80	104	PPP
Castor Bay HL-M'liskmisk	10	109	10	160	PPP
Castor Bay to Forked Bridge	15	110	22	137	PPP
Moyola-interstage	15	9.6	15	10	PPP
Moyola WTW-Mullaghboy	15	105	15	141	PPP
Reservoir to Moyola	15	6.8	15	16	PPP
Dunore LL	114.801	30	132	47	PPP
Dunore Interstage 1	N/A	N/A	132	3.2	PPP
Dunore Interstage 2	N/A	N/A	132	8.4	PPP
Dunore HL	113.341	106	125	140	PPP
Ballinree LL (R Bann)	12	135	15	164	PPP
Ballinrees LL (Dam)	N/A	N/A	0	4.8	PPP
Ballinrees Interstage	N/A	N/A	12.5	12.4	PPP
Moys WPS	3	115	3	140	PPP

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 AIR11 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.

PPP WTW's 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 77.75m calculated for PPP only is more in relation to the Pumping Head within the works.

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 2010/11 figures which may not absolutely match pump data available from the older network models but this 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; **B3**. 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 NIW 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.

In addition the confidence grade of B4 has been applied to Table 12 line 5, to recognise the AIR10 Reporter's Recommendation.

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 up - and downstream of the pumps and could be recorded via TDMS.

The whole of NI is now covered by DZS. Where returned data exists in partial completed model/field test data format, with these progressing to Calibrated Network Models, will help towards completing missing data.

Discussion with NIW Telemetry Section has recently taken place exploring what data is available on Telemweb and how this data could be made available. It is planned to meet with Telemetry Section to agree how best to progress. Data shortcomings highlighted in previous years returns included

- The reduction in the confidence of the data from older models
- The DI figure for the current reporting year may not absolutely match pump data from older network models
- Leakage reduction and changes to the system subsequent to the field test and model construction have not been taken into account.

The use of the data from Telemweb will help address these shortcomings.

Recommendations for Future Returns

- Devising a programme of flow and pressure monitoring in locations where pump data is not available under the Detailed Zonal Study Framework or Telemweb to gap fill,
- For areas that are not covered by Telemweb, a long term plan should be developed to determine when distribution pump data will require updating and where this data will be obtained. A period of time should be established after which a network model may be considered too old to supply suitable data for the return, particularly in areas where facilities have passed over to Dalriada or where significant changes to the network make a network model obsolete.
- Installing flow / pressure monitors via TDMS for future returns,

Average Pumping Head Result Comparison from 2008 to 2011

	2008 Assessment	2009 Assessment	2010 Assessment	2011 Assessment
Total DI ml/day	284.459	420.93	609.62	627.5
Sum (flow x lift)	31655.54	47845.27	84470.31	100446.95
Average Pumping Head m	111.28	113.67	138.57	161.82

The significant increase in the Average Pumping Head from AIR10 can be attributed mainly to the updated data provided by PPP (flow and lift figures and additional pump sites) which contributes 22.75m to the total increase.

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 AIR10 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. There were no specific recommendations from the reporter for this line following last year's submission.

PPP only Table

Lines 1- 4 Column 1 only - Number of sources

There have been no changes to the PPP Water sources over the reporting period.

Line 5 Column 4 only - Average pumping head

The data has changed for the following reasons;

- (i) The average flows represent updated figures for the 2010/11 year and vary from last years average flows.
- (ii) More accurate figures for Lift at each site, considering interstage pumping, is now available the Lift has therefore changed.

Lines 6 - 10 Column 1 only - Types of Treatment by Proportion

There have been 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

There have been no changes to the PPP types of treatment over the reporting period.

Lines 13 - Potable Mains

There have been 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		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-2011	CG	
A PROPERTIES											
1	Households properties connected during the year	000	3	6.380	C4	7.447	C3	3.493	C3	3.938	B3
2	Non-households properties connected during the year	000	3	1.319	B3	0.723	C3	0.167	C3	0.224	B3
B BILLING											
3	Households billed unmeasured sewage	000	3	533.506	C4	564.052	C3	568.886	C3	574.400	C2
4	Households billed measured sewage	000	3	25.616	C4	0.000	C3	0.000	C3	0.000	A1
5	Households billed sewage	000	3	559.122	C4	564.052	C3	568.886	C3	574.400	C2
6	Non-households billed unmeasured sewage	000	3	30.638	B2	27.881	C3	13.635	C3	11.496	B3
7	Non-households billed measured sewage	000	3	38.002	B2	32.063	C3	22.067	C3	22.374	B2
8	Non-households billed sewage	000	3	68.640	B2	59.944	C3	35.702	C3	33.870	B3
9	Void properties	000	3	38.357	C4	39.469	C3	41.508	C3	42.988	B3
C POPULATION											
10	Total connected population	000	3	1495.054	C4	1423.480	C4	1453.610	C4	1459.467	B3

Table 13 - Non Financial Measures – Sewerage Properties & 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 2011/12. 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 AIR10.

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.

As with Table 7, the recommendation from the Reporter following the AIR10 submission will also be considered as part of the 3rd party data source project. The Reporter recommended that as part of AIR11,

NIW review, for AIR11 submission, the revised NIHE Housing Condition Survey and check if inconsistencies in the figures for unconnected properties have been resolved.

The NIHE Housing Condition Survey is used by Leakage in the calculation of the Water Balance. Customer Systems has reviewed this report and agrees with the Reporter that it is a potentially valuable information source, although it should be considered along with the other data sources being considered as part of the 3rd party data source project to ensure that the most robust and accurate information is made available and used by NI Water in determining property status and addresses. This information will be used to inform on sewerage served as well as water served status.

Additionally, there were some actions arising from the Interim Principal Statement and Draft Scheme of Charges 08/09 which have been considered to support Table 13. These are:

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.

These actions will be considered through a project under the DQ Programme. A project is being scoped to address both IPS actions in addition to the AIR

2010 Recommendation. It is expected that the scope will be defined by end June 2011, although ultimate closure dates will be dependent on the outcome of the scoping.

There has been further significant focus on customer numbers during 2010/11, primarily due to commitments within PC10/Final Determination submissions and NIW Undertakings. As a result, there have been considerable data shifts from AIR10, most notably in the reclassification of test meters, upload of domestic metered properties and in unmeasured non-domestic numbers.

In addition, the roll-out of the metering programme has continued with by extension and associated properties influence the sewerage supply/connected status. Overall, based on the Rapid Property Summary extract, the number of non-domestic unmeasured properties has decreased during 2010/11 from circa 12300 in March 2010 to circa 10650 in March 2011. This shows a reduction of just under 2000 in year and circa 14500 since March 2008.

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 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 2008. 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 latter has been a significant step forward during 2010/11, with property numbers now being available through an automatic system based report.

Data on population continues to be obtained from Northern Ireland Statistics and Research Agency (NISRA), adjusted for the summer months based on information received from Northern Ireland Tourist Board (NITB). 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.

There are deemed to be 622 (gross) unmeasured – not charged properties which (based on sample taken) are mostly NI Water premises as per table below.

Description	Count
Sewage Disposal Works	596
Fire Authority For NI	12
Empty	14
TOTAL	622

As with Table 7, NI Water is currently investigating any 'unmeasured – not charged' properties outside of DRD/NI Water ownership.

Test Meters

NIW has a significant number of meters classified as 'test' from its legacy databases, which are being cleansed and reclassified as part of our data quality programme.

The survey and reclassification of test meters, initially identified through the Data Integrity Project, is still going. Of the 11,500 in total, duplicates were removed which reduced this figure to 10,898. 9,160 have been reclassified and 1,738 still need to be surveyed or re-surveyed following desktop investigation. As a general rule, unless there are details of a septic tank being associated with the property on system, test meters deemed billable for water are also deemed billable for sewerage. Those that are found to be non-domestic billable should be 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 2011 indicates a reduction of 2,500 non-domestic test meters and 2,300 domestic test meters during 2010/11 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 388 occupied domestic properties classified as site meters and these will require further investigations and analysis to be completed during 2011/12 to ensure these are classified correctly. It is likely that these properties are still being associated to the supply serving the development. These will be considered as part of the overall Data Quality programme.

As with Table 7, the number of non-domestic site meters has increased by 334 during 2010/11 (half of the increase during 2009/10) and circa 3452 since March 2008, driven primarily as a result of extended non-domestic charging and data cleanse activities.

Confidence Grades

We would expect the confidence grade for this table to improve throughout the year as the benefits of the data quality programme are realised.

The reporter's recommendations for AIR10 and IPS are being addressed as part of the overall data quality project and the confidence grades recorded in the table reflect the Reporters recommended confidence grades from the Undertaking 'A' Reporters Review (March 2011).

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 14 NON FINANCIAL MEASURES
SEWAGE COLLECTED (TOTAL)**

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-2011	CG	
A SEWAGE - VOLUMES											
1	Volume unmeasured household sewage	MI/d	2	244.67	B3	257.99	C3	256.26	C3	261.62	C3
2	Volume unmeasured non-household sewage	MI/d	2	20.70	B4	18.05	C3	9.19	C3	7.23	C3
3	Volume unmeasured sewage	MI/d	2	265.37	B4	276.04	C3	265.45	C3	268.85	C3
4	Volume measured household domestic sewage	MI/d	2	11.78	C3	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
6	Volume trade effluent (excluding Roads Drainage)	MI/d	2	26.25	C3	18.44	C4	28.37	B2	20.18	B2
7	Volume waste water returned	MI/d	2	382.57	C3	347.82	B4	343.20	C3	328.19	C3
8	Volume of Roads Drainage returned	MI/d	2					175.80	CX	175.80	CX

Table 14 – 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.

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 AIR11 is 9.04 MI/d. The value reported in AIR10 was 11.38 MI/d

Line 5 - Volume measured non-household domestic sewerage

The reported sewerage figure was based on actual billed sewerage discharge April 10 to March 11. The discharge volumetric information was derived directly from;

- Months 1 – 5 The monthly 'Actuals' Report which was subsequently superseded by the 'Reconciling' Report.
- Months 6 – 12 The monthly 'Reconciling' Report.
- The DRD Domestic Allowance Subsidy Assurance Report April 10 – March 11.

Please note the 'Reconciling' Report is a replica of the 'Actuals' Report. It supersedes the 'actuals' report in that it details the actual billed discharge M³. Previously the 'actuals' report was used to estimate billed discharge, using financial amounts reconciled to the general ledger, which were 'worked back' to determine estimated discharge M³.

The calculated sewerage discharge volume was 14,292,856 M³ converted to mega litres per day of 39.16 MI/d.

Sewerage volume is lower than last year due to;

- Increased leakage allowances applied in year due to 2009/10 freeze/thaw.
- Prior year outturn overstated due to leakage.
- Continued economic downturn

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 get the full year.

Line 6 - Volume trade effluent

Source of Information

The names of the traders were taken from Trade Effluent Register which is sited in Source under Resources /Databases and updated by NIW on a regular basis.

The actual volume of each trader was supplied by our Billing Section in Customer Service. Where no volumes were available, then consented volumes, on the small number of traders were used.

Commentary

AIR 10 Volume = 28.37 MI/day

AIR 11 Volume = 20.18 MI/day

This decrease of 29% is due to a number of factors, namely:

- As per the Reporter's Report (Reference Reporter's Report AIR2010, T14niw.R10, page 1, S2: T14niw.R10 Pg4 S4.1), we have used, for each trader, the standard 365 days as the denominator to calculate the volume in MI/day. This is against using the actual number of days that each individual trader discharges for 2009/10.

This difference would immediately result in a lower MI/day number.

- Also as per Reporters' Report (References Reporter's Report AIR2010, T14niw.R10, pg4, S4.1: T15niw.R10 Pg5 S5.1:Pg6, S6), the actual volumes on the large dischargers, in particular hospitals, were also used this year. As listed below, it can be seen that there was a large difference between actual and consented annual volumes for the following hospitals:

	AIR10 (m3/year)	AIR11 (m3/year)
Craigavon Hospital	219,000	42,365
Belfast City	292,000	115,102
Lagan Valley	109,500	30,560
Tyrone Country	73,000	1565

This would also contribute to a lower daily volume.

- There was a 17% reduction in the total annual volume between AIR10 and AIR11. (7357MI/year v 8856MI/year), again contributing to a lower daily volume.

For this year, only 3% of the volume is now attributable to consented flows and so the confidence grade has been increased from B2 to B1.

Line 7 – Volume of waste water returned

This line is based on the summation of lines 3, 4, 5 and 6. The components of this calculation received confidence grades of C3, A1, B3 and B2 respectively. As C3 was the lowest confidence grade for a component, this line has been allocated a confidence grade of C3.

Line 8 – Volume of Road Drainage returned.

In line with the proposed methodology, we carried out the following steps:

- 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
- 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.

- $56,287,473 \times 1.14 = \mathbf{64,167,719m^3}$ (175.80 MLD)

4. From data extracted from NIW's network information management system (NIMS) for the largest 105 urban areas in Northern Ireland (i.e. all areas with greater than 1,000 population) we determined the following:

- Aggregate length of combined sewers = 4,378km
- Aggregate length of stormwater sewers = 4,317 km.

Both of these figures were adjusted to allow for those stormwater sewers which –rather than discharging to a watercourse – are connected into the combined system.

Applying the assumption that the sewer lengths represent a 'proxy' estimate of road lengths, this yields an approximate **50:50** split between areas draining to combined systems and those draining to separate systems.

5. Using points 3 and 4 the volumes of Road Drainage returned are calculated as follows:

- Volume returned to combined sewer = 87.9 MLD
- Volume returned to storm sewer = 87.9 MLD
- Total Volume returned to sewer = 175.80 MLD

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 15 NON FINANCIAL MEASURES
SEWAGE TREATMENT (NIW Only)**

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-2011	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
2	Total load receiving secondary treatment (BOD/year)	tonnes	1			45,024.1	C3	39,716.5	C3	38,541.8	C3
3	Total load receiving primary treatment only (BOD/year)	tonnes	1			377.8	C3	199.4	C3	184.1	C3
4	Total load receiving preliminary treatment only (BOD/year)	tonnes	1			473.2	C3	553.7	C3	553.5	C3
5	Total load entering sewerage system (BOD/year)	tonnes	1			46,431.4	C5	40,931.0	C5	39,680.5	C5
6	Equivalent population served (resident)	000	2			2,088.64	C5	1,837.56	C5	1,778.08	C5
7	Equivalent population served (resident) (numerical consents)	000	2			2,024.99	C5	1,783.03	C5	1,718.57	C5
B SEWERAGE - SERVICE FACILITIES											
8	Number of sewage treatment works	nr	0			1,056	A2	1,040	A2	1,028	A2
9	Treatment capacity available (BOD5/day)	tonnes	1			133.9	D3	126.3	D3	127.0	D3
C SEWAGE - SLUDGE DISPOSAL											
14	Percentage unsatisfactory sludge disposal	%	2			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
16	Total sewage sludge disposal	ttds	1			38.0	B3	36.9	B2	30.5	B2

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 15 NON FINANCIAL MEASURES
SEWAGE TREATMENT (PPP Only)**

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-2011	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
2	Total load receiving secondary treatment (BOD/year)	tonnes	1	1,880.0		3,331.0	A2	8105.2	B3	7,396.5	B3
3	Total load receiving primary treatment only (BOD/year)	tonnes	1	0.0		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
5	Total load entering sewerage system (BOD/year)	tonnes	1					N/A	A1	7,396.5	B3
6	Equivalent population served (resident)	000	2	78.00		152.00	A2	370.10	B3	337.74	B3
7	Equivalent population served (resident) (numerical consents)	000	2			152.00	A2	370.10	B3	337.74	B3
B SEWERAGE - SERVICE FACILITIES											
8	Number of sewage treatment works	nr	0	1		2	A1	6	A1	6	A1
9	Treatment capacity available (BOD5/day)	tonnes	1	12.4		17.5	B4	30.4	B3	30.4	B3
C SEWAGE - SLUDGE DISPOSAL											
14	Percentage unsatisfactory sludge disposal	%	2	0.00				0.00	A1	0.00	A2
15	Total sewage sludge produced	ttds	1	0.8				7.4	B3	7.6	B3
16	Total sewage sludge disposal	ttds	1	0.8				1.0	B3	37.5	B3

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 15 NON FINANCIAL MEASURES

SEWAGE TREATMENT (Total)

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-2011	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
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
3	Total load receiving primary treatment only (BOD/year)	tonnes	1	482.3	C3	377.8	C3	199.4	C3	184.1	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
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
6	Equivalent population served (resident)	000	2	2,120.90	C3	2,240.64	C5	2,207.66	C5	2,115.82	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
B SEWERAGE - SERVICE FACILITIES											
8	Number of sewage treatment works	nr	0	1058	A2	1058	A2	1046	A2	1034	A2
9	Treatment capacity available (BOD5/day)	tonnes	1	132.1	D3	151.4	D4	156.7	D3	157.4	D3
C SEWAGE - SLUDGE DISPOSAL											
14	Percentage unsatisfactory sludge disposal	%	2	0.00	A1	0.00	A1	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
16	Total sewage sludge disposal	ttds	1	38.4	B2	38.0	B3	37.9	B3	38.1	B3

Table 15 – Non Financial Measures - Sewage Treatment**Line 1 - Trade effluent load receiving secondary treatment (BOD/year)**

The loading for AIR10 was 3965.81 tonnes/year compared to 3841.35 tonnes/year for AIR11. This is a 3% reduction in the loading over the two years and is due to a number of factors, one of them being that the total trade effluent discharge volume has decreased by 17% (8856 Ml/year v 7357Ml/year).

On closer examination of the results spreadsheet, it can be seen that this 3% reduction has been split between the Northern area, contributing a 13% reduction in loading but with the Southern area increasing its loading by 6%. This can be explained as follows:

During the year, a number of the major traders in the Northern area have reduced their loading by the following amounts, e.g.

██████████	52%
██████████	32%
██████████	15%
██████████	85%

There was however, an additional loading of 103 tonnes from ██████████ which came on stream this year. This equates to 6% of the total Northern loading.

As regards the Southern area, the following points can be made;

- There was a 17% increase in loading from the sampled and charged traders
- There was a 50% increase in volume discharges from both ██████████ and ██████████

Of the 56 sampled and charged traders, 25 had increases in volume whilst 26 had increases in strength. The following traders had small increases of between 3% - 4% in either volume and/or strength; ██████████

- It should also be noted that as a result of using actual flows, the standard charged traders had a significant reduction in loading of around 66%

Lines 2 - 9 – Loads and Service facilities

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 Equivalent minus the allowance for the tourist population. Since AIR10, PEs for 136 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. The method for computing loads from NIW only WWTWs is the same as was implemented for AIR10. Hence 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.

NIW has, for the first time, information pertaining to Septic Tank Imports to its WWTWs. In summary of the 15 WWTWs which receive Septic Tank Imports, the latter is discharged at the head of the Inlet Works at 2 of the WWTWs. The Septic Tank Imports are discharged to the Sludge Reception Centres at the other 13 WWTWs. For AIR11 conversion factors, received from our Scientific Staff, are being used to convert the Septic Tank Imports to PEs, for those 2 WWTWs for which the imports are discharged directly to the Inlet Works. Allowance at the other 13 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. Some work will be required going forward to understand the proportion of supernatant return resulting from the latter, as opposed to that from indigenous sludge, and to be assured of any flowmeter readings.

The only works where this sludge was discharged at the head of the works was at Belfast and Glenstall and a conversion was used to get an equivalent PE which was adopted for these sites for AIR11.

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	3049.33	8.35	0.08	83.54	1392
Glenstall	1109	5918.76	16.22	0.16	162.16	2703

NIW has also, for the first time, information pertaining to Sludge Imports to its WWTWs. 20 WWTWs have received Sludge Imports, during the AIR11 period, with 4 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. Some work will also be required to understand the proportion of supernatant return resulting from the latter, as opposed to that from the indigenous sludge.

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.

Components used in build up of Total Load	Total Pe	000 tonnes of BOD per annum
Residential	1205522	26400.94
Non-Residential	243182	5325.68
Hotels	3432	75.15
Nursery School	995	21.80
Playschool	991	21.69
Primary School	25699	562.81
Secondary School	23909	523.61
Trade Pe	127279	2787.41
Large (>7500m3) Consumers	126249	2764.85

Caravan Parks	30389	665.52
Sludge Import / Export	24250	531.08
Total (Line 5)	1811897	39680.55

Flow & Load information has been adopted for one site in AIR11. This site is Fivemiletown and details can be seen below

	PE	Comment
AIR11 PE	1693	The flow and load study was carried out during February to April 2010 and an assumption was made that trade would equate to the AIR10 trade Pe of 94 therefore this was updated with the AIR11 trade figure of 51 which gives an AIR11 figure of 1693. The AIR10 PE was based on a theoretical desk top estimate therefore more confidence can be given to the flow & load figure.
Flow & Load Equivalent PE	1736	
AIR10 Pe	2134	

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 AIR10, 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 PEs grades through targeted flow and load surveys, although the PE reviews carried out have been very comprehensive, and was in line with PE values held by others within the organisation, and the broader water industry.

The confidence grades of the data in lines 8 and 9 remain as in AIR10, 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 AIR10 for Line 2.

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Annahilt (WWTW)	317	5	PE updated with trade for AIR11
Ballynahinch (Down)	311	42	PE updated with trade for AIR11
Carrickfergus (WWTW)	261	56	PE updated with trade for AIR11
Clough (WWTW)	296	-526	Seaforde is now a pumpaway to Clough
Darragh Cross (WWTW)	288	622	This WWTWs is now a pumpaway to Saintfield
Downpatrick (WWTW)	771	1293	PE updated with trade for AIR11
Dromara (WWTW)	316	3	PE updated with trade for AIR11
Belfast (WWTW)	345	7341	PE updated with trade for AIR11
Dunmurry	346	100	PE updated with trade for AIR11
Greenisland (WWTW)	263	-5	PE updated with trade for AIR11
Hooks Corner	331	3466	This WWTWs is now a pumpaway to Lisburn (New Holland)
Kilkeel (WWTW)	313	742	PE updated with trade for AIR11
Killinchy (WWTW)	252	344	PE updated with trade for AIR11
Killyleagh (WWTW)	273	320	PE updated with trade for AIR11
Lisburn (New Holland)	329	-2691	Hooks Corner is now a pumpaway to Lisburn (New Holland)
Newcastle (WWTW)	303	25	PE updated with trade for AIR11
Newtownbreda (WWTW)	342	188	PE updated with trade for AIR11
Larne (WWTW)	2044	188	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Saintfield (WWTW)	290	-624	Darragh Cross is now pumpaway to Saintfield
Seaforde (WWTW)	294	526	This WWTWs is now a pumpaway to Clough
Seahill (WWTW)	774	0	PE updated with trade for AIR11
Whitehouse	265	463	PE updated with trade for AIR11
Glenstaghey Road(11)	1787	-4	PE for this site was updated for AIR11 following information from NIW OPS
Ballyclare	1467	181	PE updated with trade for AIR11
Ballyronan (WWTW)	1558	3	PE updated with trade for AIR11
Bushmills (WWTW)	1178	-2688	Portballintrae is now a pumpaway to Bushmills
Castledawson	1609	-31	PE updated with trade for AIR11
Corvanaghan (WWTW)	1565	-12	PE for this site was updated for AIR11 following information from NIW OPS
Creagh	1611	-1474	Toome is now a pumpaway to Clough
Draperstown	1615	-2	PE updated with trade for AIR11
Garvagh (WWTW)	1154	12	PE updated with trade for AIR11
Glenstall	1109	-2630	PE updated with trade for AIR11
Keenaghan (1)	1578	-6	PE for this site was updated for AIR11 following information from NIW OPS
Cookstown (WWTW)	1582	1183	PE updated with trade for AIR11
Magherafelt (WWTW)	1621	96	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Kilrea	1156	-53	PE updated with trade for AIR11
Lisnahall	1587	3	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Longfield (Moorside Villas)	1627	2	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Martinstown	1445	-1	PE updated with trade for AIR11
Antrim (WWTW)	1422	-344	Parkgate is now a pumpaway to Antrim
Moneymore (WWTW)	1589	-17	PE updated with trade for AIR11
Mullanahoe (WWTW)	2043	1	PE updated with trade for AIR11
Parkgate	1424	797	This WWTWs is now a pumpaway to Antrim
Rasharkin	1120	3	PE updated with trade for AIR11
Roughfort (WWTW)	1470	-22	PE updated with trade for AIR11
Seacon	1122	5	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Toome (WWTW)	1427	1474	This WWTWs is now a pumpaway to Creagh
Ballymena (WWTW)	1456	29149	PE updated with trade for AIR11
Annaghugh (WWTW)	2602	-11	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Annsborough	2687	938	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Address (WWTW)	2557	-33	PE for this site was updated for AIR11 following information from consultants.
Armagh Road(202-206)	2250	-9	This works previously only had primary treatment but upgraded for AIR11
Ballyward	2120	-6	This works previously only had primary treatment but upgraded for AIR11
Banbridge (WWTW)	2102	-10	PE updated with trade for AIR11
Benburb (WWTW)	2831	-258	Milltown (Benburb) is now a pumpaway to Clough
Brantry	2832	-8	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Caledon (WWTW)	2835	51	PE for this site was updated for AIR11 following an APT house count
Coalisland	2828	2272	PE updated with trade for AIR11
Derryhale	2570	-7	PE updated with trade for AIR11
Diviny	2403	-2	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Donaghmore (WWTW)	2840	326	PE updated with trade for AIR11
Dromore (Down)	2127	143	PE updated with trade for AIR11
Drumnaferry	2405	-8	PE for this site was updated for AIR11 following information from consultants, McAdams Design.

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Drumhillery	2574	4	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Dyan	2842	-12	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Feumore (WWTW)	2406	1	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Forkhill	2270	19	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Gilford (WWTW)	2162	0	PE updated with trade for AIR11
Hilltown (WWTW)	2701	-3	PE updated with trade for AIR11
Keady (Armagh)	2553	5	PE updated with trade for AIR11
Killeen (Tyrone)	2846	-36	PE for this site was updated for AIR11 following information from consultants, AECOM.
Killyman	2847	948	This WWTWs is now a pumpaway to Dungannon
Lisnalea	2274	-3	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Madden (WWTW)	2587	-1	PE for this site was updated for AIR11 following information from consultants, McAdams Design.

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Maghery (WWTW)	2414	-73	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Markethill	2591	2	PE updated with trade for AIR11
Maytown Road	2275	-6	This works previously only had primary treatment but upgraded for AIR11
Milltown (Benburb)	2550	258	This WWTWs is now a pumpaway to Benburb
Moira	2429	296	PE updated with trade for AIR11
Montieth	2152	-56	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Mountjoy (Dungannon)	2849	-37	PE updated with trade for AIR11
Moy (WWTW)	2859	643	PE updated with trade for AIR11
Dungannon	2850	1413	Killyman is now a pumpaway to Dungannon and an update of PE carried out during AIR11
Mullaghbane (Forkhill)	2279	-159	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Newry (WWTW)	2685	3972	PE updated with trade for AIR11
Robinsonstown	2419	22	PE for this site was updated for AIR11 following an APT house count
Silverbridge	2285	-25	PE for this site was updated for AIR11 following information from consultants, McAdams Design.

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Lisnagade Road(54-56)	2161	-2	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Tamnamore (WWTW)	2862	13	PE updated with trade for AIR11
Tandragee	2174	-269	PE updated with trade for AIR11
Warrenpoint (WWTW)	2720	21	PE updated with trade for AIR11
Aghanloo (1)	2989	-12	PE updated with trade for AIR11
Arvalee	3003	6	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Aughil (WWTW)	3006	7	PE for this site was updated for AIR11 following information from consultants, AECOM.
Aughnacloy	3007	1	PE updated with trade for AIR11
Ballykelly (L/Derry)	3016	-5	PE updated with trade for AIR11
Ballyquinn (WWTW)	3021	-1	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Belleek (Fermanagh)	3024	7	PE updated with trade for AIR11
Benone (WWTW)	3026	-42	PE for this site was updated for AIR11 following information from consultants, AECOM.
Camus	3034	6	PE for this site was updated for AIR11 following an APT house count

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Castledearg (WWTW)	3042	-7	PE updated with trade for AIR11
Omagh (WWTW)	3999	8297	PE updated with trade for AIR11
Culmore (WWTW)	3071	-1168	PE updated with trade for AIR11
Derrygonnelly (WWTW)	3074	-50	PE for this site was updated for AIR11 following an APT house count
Donagheady (WWTW)	3079	4	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Donnybrewer	3080	26	PE updated with trade for AIR11
Dooish	3081	-21	PE for this site was updated for AIR11 following an APT house count
Dungiven	3101	0	PE updated with trade for AIR11
Donemana	3103	127	PE updated with trade for AIR11
Enniskillen	3218	132	PE updated with trade for AIR11
Fintona (WWTW)	3112	-1	PE updated with trade for AIR11
Fivemiletown (WWTW)	3113	442	PE updated with trade for AIR11
Glack (WWTW)	3118	-91	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Kesh (WWTW)	3140	23	PE updated with trade for AIR11
Killaloo	3142	-4	PE for this site was updated for AIR11 following information from consultants, McAdams Design.

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Lack	3154	86	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Limavady (WWTW)	3162	13	PE updated with trade for AIR11
Lisnaskea (WWTW)	3171	48	PE updated with trade for AIR11
Magheramason	3177	7	PE updated with trade for AIR11
Newtownstewart (WWTW)	3202	2	PE updated with trade for AIR11
Newtownbutler (WWTW)	3200	1	PE updated with trade for AIR11
Seskinore	3217	-37	PE for this site was updated for AIR11 following an APT house count
Strabane	3223	-2244	PE updated with trade for AIR11
Tattysallagh	3227	14	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
North Coast (WWTWs)	4150	252	PE updated with trade for AIR11
	Total	53635	Change in Line 2 PE since AIR10

The change in Pe equates to a reduction in load of **1174.7 t BOD/yr** (i.e. 53635 x 60 for 60g/hd/day /1000/1000 x 365) from AIR10 to AIR11

Difference between AIR11 and AIR10:

Line 2 for AIR10 -	39716.5
Line 2 for AIR 11 -	38541.8
Total Difference -	1174.7

Line 3 - Total load receiving primary treatment only

The table below shows the changes in WWTWs receiving primary treatment only since AIR10 for Line 3.

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Ardglass (WWTW)	268	720	Trade figure updated for AIR11
Ballyhalbert Old (Retention Tank)	215	-2719	This works was upgraded from a Screened Sea Outfall to a Prim Treatment works
Ballysallagh WTW (Septic Tank)	6	3	This site has been decommissioned for AIR11
Hillside Road(121)	1722	6	This site has been designated as private for AIR11
Gracehill Road(28)	1735	6	This site has been designated as private for AIR11
Drumconvis Road(16-18)	1801	-3	PE figure updated by APT for AIR11
Glarryford (WTW) Septic Tank	1210	3	This WWTWs has been decommissioned for AIR11
Limestone (1)	3164	6	This site has been designated as private for AIR11
Portballantrae (WWTW)	1168	2694	This site is a pumpaway to Bushmills for AIR11
Armagh Road(202-206)	2250	9	This works previously only had primary treatment but upgraded for AIR11
Ballyward	2120	6	This works previously only had primary treatment but upgraded for AIR11
Maytown Road	2275	6	This works previously only had primary treatment but upgraded for AIR11
Mountain View (Drumintee)	2278	-34	PE figure updated by APT for AIR11
Drumavally	3087	-5	PE figure updated by the consultants AECOM for AIR11
	Total	698	Change in Line 3 PE since AIR10

The change in Pe equates to a reduction in load of **15.3 t BOD/yr** (i.e. 698 x 60 for 60g/hd/day /1000/1000 x 365) from AIR10 to AIR11

Difference between AIR11 and AIR10:

Line 3 for AIR10 -	199.4
Line 3 for AIR 11 -	184.1
Total Difference -	15.3

Line 4 - Total load receiving preliminary treatment only

The table below shows the changes in WWTWs receiving preliminary only since AIR10 for Line 4.

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Ballycastle (WWTW)	1071	-1	PE Updated with Trade for AIR11
Tully Road Headworks	3975	6	PE updated with Trade for AIR11
	Total	5	Change in Line 4 PE since AIR10

The change in Pe equates to a reduction in load of **0.2 t BOD/yr** (i.e. 5 x 60 for 60g/hd/day /1000/1000 x 365) from AIR10 to AIR11, allowing for rounding up and down and conversions.

Difference between AIR11 and AIR10:

Line 4 for AIR10 -	553.7
Line 4 for AIR 11 -	553.5
Total Difference -	0.2

Line 5 - Total load entering sewerage system

The table below shows the changes in WWTWs since AIR10 that affects load entering the system for Line 5.

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Annahilt (WWTW)	317	5	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Ardglass (WWTW)	268	720	PE updated with trade for AIR11
Ballysallagh WTW (Septic Tank)	6	3	This site has been decommissioned for AIR11
Ballynahinch (Down)	311	42	PE updated with trade for AIR11
Carrickfergus (WWTW)	261	56	PE updated with trade for AIR11
Clough (WWTW)	296	-526	Seaforde is now a pumpaway to Clough
Darragh Cross (WWTW)	288	622	This WWTWs is now a pumpaway to Saintfield
Downpatrick (WWTW)	771	1293	PE updated with trade for AIR11
Dromara (WWTW)	316	3	PE updated with trade for AIR11
Belfast (WWTW)	345	7341	PE updated with trade for AIR11
Dunmurry	346	100	PE updated with trade for AIR11
Greenisland (WWTW)	263	-5	PE updated with trade for AIR11
Hooks Corner	331	3466	This WWTWs is now a pumpaway to Lisburn (New Holland)
Kilkeel (WWTW)	313	742	PE updated with trade for AIR11
Killinchy (WWTW)	252	344	PE updated with trade for AIR11
Killyleagh (WWTW)	273	320	PE updated with trade for AIR11
Lisburn (New Holland)	329	-2691	Hooks Corner is now a pumpaway to Lisburn (New Holland)
Newcastle (WWTW)	303	25	PE updated with trade for AIR11
Newtownbreda (WWTW)	342	188	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Portavogie(Retention Tank)	209	43	This site has been updated with trade for AIR11
Larne (WWTW)	2044	188	PE updated with trade for AIR11
Saintfield (WWTW)	290	-624	Darragh Cross is now pumpaway to Saintfield
Seaforde (WWTW)	294	526	This WWTWs is now a pumpaway to Clough
Seahill (WWTW)	774	0	PE updated with trade for AIR11
Whitehouse	265	463	PE updated with trade for AIR11
Glenstaghey Road(11)	1787	-4	PE for this site was updated for AIR11 following information from NIW OPS
Hillside Road(121)	1722	6	This site has been designated as private for AIR11
Gracehill Road(28)	1735	6	This site has been designated as private for AIR11
Ballycastle (WWTW)	1071	-1	PE updated with trade for AIR11
Ballyclare	1467	181	PE updated with trade for AIR11
Ballyronan (WWTW)	1558	3	PE updated with trade for AIR11
Bushmills (WWTW)	1178	-2688	Portballintrae is now a pumpaway to Bushmills
Castledawson	1609	-31	PE updated with trade for AIR11
Corvanaghan (WWTW)	1565	-12	PE for this site was updated for AIR11 following information from NIW OPS
Creagh	1611	-1474	Toome is now a pumpaway to Clough
Draperstown	1615	-2	PE updated with trade for AIR11
Drumconvis Road(16-18)	1801	-3	PE figure updated by APT for AIR11
Garvagh (WWTW)	1154	12	PE updated with trade for AIR11
Glarryford (WTW) Septic Tank	1210	3	This WWTWs has been decommissioned for AIR11
Glenstall	1109	-2630	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Keenaghan (1)	1578	-6	PE for this site was updated for AIR11 following information from NIW OPS
Cookstown (WWTW)	1582	1183	PE updated with trade for AIR11
Magherafelt (WWTW)	1621	96	PE updated with trade for AIR11
Kilrea	1156	-53	PE updated with trade for AIR11
Limestone (1)	3164	6	This site has been designated as private for AIR11
Lisnahall	1587	3	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Longfield (Moorside Villas)	1627	2	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Martinstown	1445	-1	PE updated with trade for AIR11
Antrim (WWTW)	1422	-344	Parkgate is now a pumpaway to Antrim
Money more (WWTW)	1589	-17	PE updated with trade for AIR11
Mullanahoe (WWTW)	2043	1	PE updated with trade for AIR11
Parkgate	1424	797	This WWTWs is now a pumpaway to Antrim
Portballantrae (WWTW)	1168	2694	This site is a pumpaway to Bushmills for AIR11
Rasharkin	1120	3	PE updated with trade for AIR11
Roughfort (WWTW)	1470	-22	PE updated with trade for AIR11
Seacon	1122	5	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Toome (WWTW)	1427	1474	This WWTWs is now a pumpaway to Creagh
Ballymena (WWTW)	1456	29149	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Tully Road Headworks	3975	6	PE updated with trade for AIR11
Annaghugh (WWTW)	2602	-11	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Annsborough	2687	938	PE updated with trade for AIR11
Ardrress (WWTW)	2557	-33	PE for this site was updated for AIR11 following information from consultants.
Banbridge (WWTW)	2102	-10	PE updated with trade for AIR11
Benburb (WWTW)	2831	-258	Milltown (Benburb) is now a pumpaway to Clough
Brantry	2832	-8	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Caledon (WWTW)	2835	51	PE for this site was updated for AIR11 following an APT house count
Coaliland	2828	2272	PE updated with trade for AIR11
Derryhale	2570	-7	PE updated with trade for AIR11
Diviny	2403	-2	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Donaghmore (WWTW)	2840	326	PE updated with trade for AIR11
Dromore (Down)	2127	143	PE updated with trade for AIR11
Drumnaferry	2405	-8	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Drumhillery	2574	4	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Dyan	2842	-12	PE for this site was updated for AIR11 following information from consultants, McAdams Design.

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Feumore (WWTW)	2406	1	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Forkhill	2270	19	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Gilford (WWTW)	2162	0	PE updated with trade for AIR11
Hilltown (WWTW)	2701	-3	PE updated with trade for AIR11
Keady (Armagh)	2553	5	PE updated with trade for AIR11
Killeen (Tyrone)	2846	-36	PE for this site was updated for AIR11 following information from consultants, AECOM.
Killyman	2847	948	This WWTWs is now a pumpaway to Dungannon
Lisnalea	2274	-3	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Madden (WWTW)	2587	-1	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Maghery (WWTW)	2414	-73	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Markethill	2591	2	PE updated with trade for AIR11
Milltown (Benburb)	2550	258	This WWTWs is now a pumpaway to Benburb
Moira	2429	296	PE updated with trade for AIR11
Montieth	2152	-56	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Mountjoy (Dungannon)	2849	-37	PE updated with trade for AIR11
Mountain View (Drumintee)	2278	-34	PE figure updated by APT for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Moy (WWTW)	2859	643	PE updated with trade for AIR11
Dungannon	2850	1413	Killyman is now a pumpaway to Dungannon and an update of PE carried out during AIR11
Mullaghbane (Forkhill)	2279	-159	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Newry (WWTW)	2685	3972	PE updated with trade for AIR11
Robinsonstown	2419	22	PE for this site was updated for AIR11 following an APT house count
Silverbridge	2285	-25	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Lisnagade Road(54-56)	2161	-2	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Tamnamore (WWTW)	2862	13	PE updated with trade for AIR11
Tandragee	2174	-269	PE updated with trade for AIR11
Warrenpoint (WWTW)	2720	21	PE updated with trade for AIR11
Aghanloo (1)	2989	-12	PE updated with trade for AIR11
Arvalee	3003	6	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Aughil (WWTW)	3006	7	PE for this site was updated for AIR11 following information from consultants, AECOM.
Aughnacloy	3007	1	PE updated with trade for AIR11
Ballykelly (L/Derry)	3016	-5	PE updated with trade for AIR11
Ballyquinn (WWTW)	3021	-1	PE for this site was updated for AIR11 following information from consultants, McAdams Design.

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Belleek (Fermanagh)	3024	7	PE updated with trade for AIR11
Benone (WWTW)	3026	-42	PE for this site was updated for AIR11 following information from consultants, AECOM.
Camus	3034	6	PE for this site was updated for AIR11 following an APT house count
Castleberg (WWTW)	3042	-7	PE updated with trade for AIR11
Omagh (WWTW)	3999	8297	PE updated with trade for AIR11
Culmore (WWTW)	3071	-1168	PE updated with trade for AIR11
Derrygonnelly (WWTW)	3074	-50	PE for this site was updated for AIR11 following an APT house count
Donagheady (WWTW)	3079	4	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Donnybrewer	3080	26	PE updated with trade for AIR11
Dooish	3081	-21	PE for this site was updated for AIR11 following an APT house count
Drumavally	3087	-5	PE figure updated by the consultants AECOM for AIR11
Dungiven	3101	0	PE updated with trade for AIR11
Donemana	3103	127	PE updated with trade for AIR11
Enniskillen	3218	132	PE updated with trade for AIR11
Fintona (WWTW)	3112	-1	PE updated with trade for AIR11
Fivemiletown (WWTW)	3113	442	PE updated with trade for AIR11
Glack (WWTW)	3118	-91	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Kesh (WWTW)	3140	23	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Killaloo	3142	-4	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Lack	3154	86	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Letterbin (WWTW)	3158	0	PE for this site was updated for AIR11 following information from consultants, McAdam Design
Limavady (WWTW)	3162	13	PE updated with trade for AIR11
Lisnaskea (WWTW)	3171	48	PE updated with trade for AIR11
Magheramason	3177	7	PE updated with trade for AIR11
Newtownstewart (WWTW)	3202	2	PE updated with trade for AIR11
Newtownbutler (WWTW)	3200	1	PE updated with trade for AIR11
Seskinore	3217	-37	PE for this site was updated for AIR11 following an APT house count
Strabane	3223	-2244	PE updated with trade for AIR11
Tattysallagh	3227	14	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
North Coast (WWTWs)	4150	252	PE updated with trade for AIR11
	Total	57101	Change in Line 5 PE since AIR10

The change in Pe equates to a reduction in load of **1250.5 t BOD/yr** (i.e. 57101 x 60 for 60g/hd/day /1000/1000 x 365) from AIR10 to AIR11, allowing for rounding up and down and conversions.

Difference between AIR11 and AIR10:

Line 5 for AIR10 -	40931.0
Line 5 for AIR 11 -	39680.5
Total Difference -	1250.5

Line 6 - Equivalent population served (resident)

The table below shows the changes in WWTWs since AIR10 that affects equivalent population served (resident) for Line 6.

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Annahilt (WWTW)	317	5	PE updated with trade for AIR11
Ardglass (WWTW)	268	720	PE updated with trade for AIR11
Ballysallagh WTW (Septic Tank)	6	3	This site has been decommissioned for AIR11
Ballynahinch (Down)	311	42	PE updated with trade for AIR11
Carrickfergus (WWTW)	261	56	PE updated with trade for AIR11
Clough (WWTW)	296	-526	Seaforde is now a pumpaway to Clough
Darragh Cross (WWTW)	288	622	This WWTWs is now a pumpaway to Saintfield
Downpatrick (WWTW)	771	1293	PE updated with trade for AIR11
Dromara (WWTW)	316	3	PE updated with trade for AIR11
Belfast (WWTW)	345	7341	PE updated with trade for AIR11
Dunmurry	346	100	PE updated with trade for AIR11
Greenisland (WWTW)	263	-5	PE updated with trade for AIR11
Hooks Corner	331	3466	This WWTWs is now a pumpaway to Lisburn (New Holland)

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Kilkeel (WWTW)	313	742	PE updated with trade for AIR11
Killinchy (WWTW)	252	344	PE updated with trade for AIR11
Killyleagh (WWTW)	273	320	PE updated with trade for AIR11
Lisburn (New Holland)	329	-2691	Hooks Corner is now a pumpaway to Lisburn (New Holland)
Newcastle (WWTW)	303	25	PE updated with trade for AIR11
Newtownbreda (WWTW)	342	188	PE updated with trade for AIR11
Portavogie(Retention Tank)	209	43	This site has been updated with trade for AIR11
Larne (WWTW)	2044	188	PE updated with trade for AIR11
Saintfield (WWTW)	290	-624	Darragh Cross is now pumpaway to Saintfield
Seaforde (WWTW)	294	526	This WWTWs is now a pumpaway to Clough
Seahill (WWTW)	774	0	PE updated with trade for AIR11
Whitehouse	265	463	PE updated with trade for AIR11
Glenstaghey Road(11)	1787	-4	PE for this site was updated for AIR11 following information from NIW OPS
Hillside Road(121)	1722	6	This site has been designated as private for AIR11
Gracehill Road(28)	1735	6	This site has been designated as private for AIR11
Ballycastle (WWTW)	1071	-1	PE updated with trade for AIR11
Ballyclare	1467	181	PE updated with trade for AIR11
Ballyronan (WWTW)	1558	3	PE updated with trade for AIR11
Bushmills (WWTW)	1178	-2071	Portballintrae is now a pumpaway to Bushmills
Castledawson	1609	-31	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Corvanaghan (WWTW)	1565	-12	PE for this site was updated for AIR11 following information from NIW OPS
Creagh	1611	-1468	Toome is now a pumpaway to Clough
Draperstown	1615	-2	PE updated with trade for AIR11
Drumconvis Road(16-18)	1801	-3	PE figure updated by APT for AIR11
Garvagh (WWTW)	1154	12	PE updated with trade for AIR11
Glarryford (WTW) Septic Tank	1210	3	This WWTWs has been decommissioned for AIR11
Glenstall	1109	-2630	PE updated with trade for AIR11
Keenaghan (1)	1578	-6	PE for this site was updated for AIR11 following information from NIW OPS
Cookstown (WWTW)	1582	1183	PE updated with trade for AIR11
Magherafelt (WWTW)	1621	96	PE updated with trade for AIR11
Kilrea	1156	-53	PE updated with trade for AIR11
Limestone (1)	3164	6	This site has been designated as private for AIR11
Lisnahall	1587	3	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Longfield (Moorside Villas)	1627	2	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Martinstown	1445	-1	PE updated with trade for AIR11
Antrim (WWTW)	1422	-344	Parkgate is now a pumpaway to Antrim
Moneymore (WWTW)	1589	-17	PE updated with trade for AIR11
Mullanahoe (WWTW)	2043	1	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Parkgate	1424	797	This WWTWs is now a pumpaway to Antrim
Portballantrae (WWTW)	1168	2077	This site is a pumpaway to Bushmills for AIR11
Rasharkin	1120	3	PE updated with trade for AIR11
Roughfort (WWTW)	1470	-22	PE updated with trade for AIR11
Seacon	1122	5	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Toome (WWTW)	1427	1468	This WWTWs is now a pumpaway to Creagh
Ballymena (WWTW)	1456	29149	PE updated with trade for AIR11
Tully Road Headworks	3975	6	PE updated with trade for AIR11
Annaghugh (WWTW)	2602	-11	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Annsborough	2687	1331	PE updated with trade for AIR11
Ardress (WWTW)	2557	-33	PE for this site was updated for AIR11 following information from consultants.
Banbridge (WWTW)	2102	-10	PE updated with trade for AIR11
Benburb (WWTW)	2831	-258	Milltown (Benburb) is now a pumpaway to Clough
Brantry	2832	-8	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Caledon (WWTW)	2835	51	PE for this site was updated for AIR11 following an APT house count
Coalisland	2828	2272	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Derryhale	2570	-7	PE updated with trade for AIR11
Diviny	2403	-2	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Donaghmore (WWTW)	2840	326	PE updated with trade for AIR11
Dromore (Down)	2127	143	PE updated with trade for AIR11
Drumnaferry	2405	-8	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Drumhillery	2574	4	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Dyan	2842	-12	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Feumore (WWTW)	2406	1	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Forkhill	2270	19	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Gilford (WWTW)	2162	0	PE updated with trade for AIR11
Hilltown (WWTW)	2701	-3	PE updated with trade for AIR11
Keady (Armagh)	2553	5	PE updated with trade for AIR11
Killeen (Tyrone)	2846	-36	PE for this site was updated for AIR11 following information from consultants, AECOM.

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Killyman	2847	948	This WWTWs is now a pumpaway to Dungannon
Lisnalea	2274	-3	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Madden (WWTW)	2587	-1	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Maghery (WWTW)	2414	-73	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Markethill	2591	2	PE updated with trade for AIR11
Milltown (Benburb)	2550	258	This WWTWs is now a pumpaway to Benburb
Moira	2429	296	PE updated with trade for AIR11
Montieth	2152	-56	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Mountjoy (Dungannon)	2849	-37	PE updated with trade for AIR11
Mountain View (Drumintee)	2278	-34	PE figure updated by APT for AIR11
Moy (WWTW)	2859	643	PE updated with trade for AIR11
Dungannon	2850	3401	Killyman is now a pumpaway to Dungannon and an update of PE carried out during AIR11
Mullaghbane (Forkhill)	2279	-159	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Newry (WWTW)	2685	3972	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Robinsonstown	2419	22	PE for this site was updated for AIR11 following an APT house count
Silverbridge	2285	-25	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Lisnagade Road(54-56)	2161	-2	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Tamnamore (WWTW)	2862	13	PE updated with trade for AIR11
Tandragee	2174	-269	PE updated with trade for AIR11
Warrenpoint (WWTW)	2720	21	PE updated with trade for AIR11
Aghanloo (1)	2989	-12	PE updated with trade for AIR11
Arvalee	3003	6	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Aughil (WWTW)	3006	7	PE for this site was updated for AIR11 following information from consultants, AECOM.
Aughnacloy	3007	1	PE updated with trade for AIR11
Ballykelly (L/Derry)	3016	-5	PE updated with trade for AIR11
Ballyquinn (WWTW)	3021	-1	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Belleek (Fermanagh)	3024	7	PE updated with trade for AIR11
Benone (WWTW)	3026	-42	PE for this site was updated for AIR11 following information from consultants, AECOM.

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Camus	3034	6	PE for this site was updated for AIR11 following an APT house count
Castleberg (WWTW)	3042	-7	PE updated with trade for AIR11
Omagh (WWTW)	3999	8297	PE updated with trade for AIR11
Culmore (WWTW)	3071	-1168	PE updated with trade for AIR11
Derrygonnelly (WWTW)	3074	-50	PE for this site was updated for AIR11 following an APT house count
Donagheady (WWTW)	3079	4	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Donnybrewer	3080	26	PE updated with trade for AIR11
Dooish	3081	-21	PE for this site was updated for AIR11 following an APT house count
Drumavally	3087	-5	PE figure updated by the consultants AECOM for AIR11
Dungiven	3101	0	PE updated with trade for AIR11
Donemana	3103	127	PE updated with trade for AIR11
Enniskillen	3218	132	PE updated with trade for AIR11
Fintona (WWTW)	3112	-1	PE updated with trade for AIR11
Fivemiletown (WWTW)	3113	441	PE updated with trade for AIR11, and F&L Survey
Glack (WWTW)	3118	-91	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Kesh (WWTW)	3140	23	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Killaloo	3142	-4	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Lack	3154	86	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Limavady (WWTW)	3162	13	PE updated with trade for AIR11
Lisnaskea (WWTW)	3171	48	PE updated with trade for AIR11
Magheramason	3177	7	PE updated with trade for AIR11
Newtownstewart (WWTW)	3202	2	PE updated with trade for AIR11
Newtownbutler (WWTW)	3200	1	PE updated with trade for AIR11
Seskinore	3217	-37	PE for this site was updated for AIR11 following an APT house count
Strabane	3223	-2244	PE updated with trade for AIR11
Tattysallagh	3227	14	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
North Coast (WWTWs)	4150	252	PE updated with trade for AIR11
	Total	59481	Change in Line 6 PE since AIR10

Difference between AIR11 and AIR10:

Line 6 for AIR10 -	1837560
Line 6 for AIR 11 -	1778080
Total Difference -	59480

Line 7 - Equivalent population served (resident) (Numerical consents)

The table below shows the changes in WWTWs since AIR10 that affects equivalent population served (resident) with numerical consents for Line 7.

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Annahilt (WWTW)	317	5	PE updated with trade for AIR11
Ardglass (WWTW)	268	720	PE updated with trade for AIR11
Ballykinler (WWTW)	299	2245	This WWTWs no longer has a numeric consent
Ballynahinch (Down)	311	42	PE updated with trade for AIR11
Carrickfergus (WWTW)	261	56	PE updated with trade for AIR11
Clough (WWTW)	296	-526	Seaforde is now a pumpaway to Clough
Darragh Cross (WWTW)	288	622	This WWTWs is now a pumpaway to Saintfield
Downpatrick (WWTW)	771	1293	PE updated with trade for AIR11
Dromara (WWTW)	316	3	PE updated with trade for AIR11
Drumlough	320	115	This WWTWs no longer has a numeric consent
Belfast (WWTW)	345	7341	PE updated with trade for AIR11
Dunmurry	346	100	PE updated with trade for AIR11
Glassdrumman (Down)	302	209	This WWTWs no longer has a numeric consent
Greenisland (WWTW)	263	-5	PE updated with trade for AIR11
Hooks Corner	331	3466	This WWTWs is now a pumpaway to Lisburn (New Holland)
Kilkeel (WWTW)	313	742	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Killinchy (WWTW)	252	344	PE updated with trade for AIR11
Killough (Retention Tank)	275	1445	This WWTWs no longer has a numeric consent
Killyleagh (WWTW)	273	320	PE updated with trade for AIR11
Mullaghglass (Antrim)	325	184	This WWTWs no longer has a numeric consent
Lisburn (New Holland)	329	-2691	Hooks Corner is now a pumpaway to Lisburn (New Holland)
Newcastle (WWTW)	303	25	PE updated with trade for AIR11
Newtownbreda (WWTW)	342	188	PE updated with trade for AIR11
Portavogie(Retention Tank)	209	43	This site has been updated with trade for AIR11
Ringneill (WWTW)	237	-673	This is a new Numeric WWTWs for AIR11
Larne (WWTW)	2044	188	PE updated with trade for AIR11
Saintfield (WWTW)	290	-624	Darragh Cross is now pumpaway to Saintfield
Seaforde (WWTW)	294	526	This WWTWs is now a pumpaway to Clough
Seahill (WWTW)	774	0	PE updated with trade for AIR11
Whitehouse	265	463	PE updated with trade for AIR11
Ballycastle (WWTW)	1071	-1	PE Updated with Trade for AIR11
Ballyclare	1467	181	PE updated with trade for AIR11
Ballyronan (WWTW)	1558	3	PE updated with trade for AIR11
Bushmills (WWTW)	1178	-2071	Portballintrae is now a pumpaway to Bushmills

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Castledawson	1609	-31	PE updated with trade for AIR11
Creagh	1611	-1468	Toome is now a pumpaway to Clough
Draperstown	1615	-2	PE updated with trade for AIR11
Garvagh (WWTW)	1154	12	PE updated with trade for AIR11
Glenstall	1109	-2630	PE updated with trade for AIR11
Cookstown (WWTW)	1582	1183	PE updated with trade for AIR11
Magherafelt (WWTW)	1621	96	PE updated with trade for AIR11
Kilrea	1156	-53	PE updated with trade for AIR11
Martinstown	1445	-1	PE updated with trade for AIR11
Antrim (WWTW)	1422	-344	Parkgate is now a pumpaway to Antrim
Moneymore (WWTW)	1589	-17	PE updated with trade for AIR11
Mullanahoe (WWTW)	2043	1	PE updated with trade for AIR11
Parkgate	1424	797	This WWTWs is now a pumpaway to Antrim
Rasharkin	1120	3	PE updated with trade for AIR11
The Rock	1594	137	This WWTWs no longer has a numeric consent
Roughfort (WWTW)	1470	-22	PE updated with trade for AIR11
Toome (WWTW)	1427	1468	This WWTWs is now a pumpaway to Creagh
Ballymena (WWTW)	1456	29149	PE updated with trade for AIR11
Annsborough	2687	1331	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Banbridge (WWTW)	2102	-10	PE updated with trade for AIR11
Benburb (WWTW)	2831	-258	Milltown (Benburb) is now a pumpaway to Clough
Caledon (WWTW)	2835	51	PE for this site was updated for AIR11 following an APT house count
Coalisland	2828	2272	PE updated with trade for AIR11
Derryhale	2570	-7	PE updated with trade for AIR11
Donaghmore (WWTW)	2840	326	PE updated with trade for AIR11
Dromore (Down)	2127	143	PE updated with trade for AIR11
Forkhill	2270	19	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Gilford (WWTW)	2162	0	PE updated with trade for AIR11
Hilltown (WWTW)	2701	-3	PE updated with trade for AIR11
Keady (Armagh)	2553	5	PE updated with trade for AIR11
Killeen (Tyrone)	2846	-36	PE for this site was updated for AIR11 following information from consultants, AECOM.
Killyman	2847	948	This WWTWs is now a pumpaway to Dungannon
Maghery (WWTW)	2414	-73	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Markethill	2591	2	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Moira	2429	296	PE updated with trade for AIR11
Mountjoy (Dungannon)	2849	-37	PE updated with trade for AIR11
Moy (WWTW)	2859	643	PE updated with trade for AIR11
Dungannon	2850	3401	Killyman is now a pumpaway to Dungannon and an update of PE carried out during AIR11
Mullaghbane (Forkhill)	2279	-159	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Newry (WWTW)	2685	3972	PE updated with trade for AIR11
Robinsonstown	2419	22	PE for this site was updated for AIR11 following an APT house count
Tamnamore (WWTW)	2862	13	PE updated with trade for AIR11
Tandragee	2174	-269	PE updated with trade for AIR11
Warrenpoint (WWTW)	2720	21	PE updated with trade for AIR11
Aghanloo (1)	2989	-12	PE updated with trade for AIR11
Aughnacloy	3007	1	PE updated with trade for AIR11
Ballykelly (L/Derry)	3016	-5	PE updated with trade for AIR11
Belleek (Fermanagh)	3024	7	PE updated with trade for AIR11
Benone (WWTW)	3026	205	PE for this site was updated for AIR11 following information from consultants, AECOM.

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Castledearg (WWTW)	3042	-7	PE updated with trade for AIR11
Omagh (WWTW)	3999	8297	PE updated with trade for AIR11
Culmore (WWTW)	3071	-1168	PE updated with trade for AIR11
Derrygonnelly (WWTW)	3074	-50	PE for this site was updated for AIR11 following an APT house count
Donagh (WWTW)	3078	221	This WWTWs no longer has a numeric consent
Donnybrewer	3080	26	PE updated with trade for AIR11
Drumavally	3087	603	PE figure updated by the consultants AECOM for AIR11
Dungiven	3101	0	PE updated with trade for AIR11
Donemana	3103	127	PE updated with trade for AIR11
Enniskillen	3218	132	PE updated with trade for AIR11
Fintona (WWTW)	3112	-1	PE updated with trade for AIR11
Fivemiletown (WWTW)	3113	441	PE updated with trade for AIR11
Greysteel (WWTW)	3123	2175	This WWTWs no longer has a numeric consent
Kesh (WWTW)	3140	23	PE updated with trade for AIR11
Lack	3154	86	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Limavady (WWTW)	3162	13	PE updated with trade for AIR11
Lisnaskea (WWTW)	3171	48	PE updated with trade for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Magheramason	3177	7	PE updated with trade for AIR11
Newtownstewart (WWTW)	3202	2	PE updated with trade for AIR11
Newtownbutler (WWTW)	3200	1	PE updated with trade for AIR11
Seskinore	3217	-37	PE for this site was updated for AIR11 following an APT house count
Strabane	3223	-2244	PE updated with trade for AIR11
Carrowclare	3300	148	This WWTWs no longer has a numeric consent
North Coast (WWTWs)	4150	252	PE updated with trade for AIR11
	Total	64461	Change in Line 7 PE since AIR10

Difference between AIR11 and AIR10:

Line 7 for AIR10 -	1783030
Line 7 for AIR 11 -	1718570
Total Difference -	64460

Line 8 - Number of sewage treatment works

The number of WWTWs of 1028, on this line differs from the total of 1045 as shown in Table 17c, as the former does not include the screened outfalls (4 No.) and the unscreened outfalls (13 No.), as per the definition for this line.

The table below shows the changes in numbers of WWTWs since AIR10 for Line 8.

Name of Works	CAR ID	Change in Number of Sewage Treatment Works	Comments
Ballyhalbert Old (Retention Tank)	215	Addition	This works was upgraded from a Screened Sea Outfall to a Prim Treatment works

Name of Works	CAR ID	Change in Number of Sewage Treatment Works	Comments
Ballysallagh WTW (Septic Tank)	6	Reduction	This site has been decommissioned for AIR11
Darragh Cross (WWTW)	288	Reduction	This WWTWs is now a pumpaway for AIR11
Hooks Corner	331	Reduction	This WWTWs is now a pumpaway for AIR11
Seaforde (WWTW)	294	Reduction	This WWTWs is now a pumpaway for AIR11
Hillside Road(121)	1722	Reduction	This site has been designated as private for AIR11
Gracehill Road(28)	1735	Reduction	This site has been designated as private for AIR11
Glarryford (WTW) Septic Tank	1210	Reduction	This site has been decommissioned for AIR11
Limestone (1)	3164	Reduction	This site has been designated as private for AIR11
Parkgate	1424	Reduction	This WWTWs is now a pumpaway for AIR11
Portballantrae (WWTW)	1168	Reduction	This WWTWs is now a pumpaway for AIR11
Toome (WWTW)	1427	Reduction	This WWTWs is now a pumpaway for AIR11
Killyman	2847	Reduction	This WWTWs is now a pumpaway for AIR11
Milltown (Benburb)	2550	Reduction	This WWTWs is now a pumpaway for AIR11
		Net Reduction	12

Difference between AIR11 and AIR10:

Line 8 for AIR10 -	1040
Line 8 for AIR 11 -	1028
Total Difference -	12

Line 9 – Treatment capacity available

The table below shows the changes in Treatment Capacity Available at WWTWs since AIR10 for Line 9.

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Ballyhalbert Old (Retention Tank)	215	-8942	This WWTWs was upgraded for AIR11
Ballysallagh WTW (Septic Tank)	6	3	This site has been decommissioned for AIR11
Darragh Cross (WWTW)	288	200	This WWTWs has been pumped away for AIR11
Hooks Corner	331	350	This WWTWs has been pumped away for AIR11
Kilmood	255	-51	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Loughries	230	30	This WWTWs was upgraded for AIR11
Moneyreagh (WWTW)	337	1268	The Design Pe of this site was updated following additional information from EP
Ravarnet	319	-108	This WWTWs was upgraded for AIR11
Seaforde (WWTW)	294	250	This WWTWs has been pumped away for AIR11
Hillside Road(121)	1722	6	This WWTWs has been designated as private for AIR11
Gracehill Road(28)	1735	20	This site has been designated as private for AIR11
Ballymaguigan	1603	-48	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Brockaghboy (WWTW)	1140	-5	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Bushmills (WWTW)	1178	-7560	This WWTWs was upgraded for AIR11
Cargan (WWTW)	1433	-240	This WWTWs was upgraded for AIR11
Cloughmills (WWTW)	1096	-203	This WWTWs was upgraded for AIR11
Coagh (WWTW)	1562	-1000	This WWTWs was upgraded for AIR11
Creagh	1611	-3900	This WWTWs was upgraded for AIR11
Dartress	1148	-28	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Duneany (WWTW)	1440	-21	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Glarryford (WWTW)	1441	-42	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Glarryford (WTW) Septic Tank	1210	3	This WWTWs has been decommissioned for AIR11
Glenstall	1109	14573	The Design Pe of this site was updated following additional information from EP
Limestone (1)	3164	6	This WWTWs has been designated as private for AIR11
Maghera (L/Derry)	1629	-3749	This WWTWs was upgraded for AIR11
Martinstown	1445	-135	This WWTWs was upgraded for AIR11
Moneymore (WWTW)	1589	-1545	This WWTWs was upgraded for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Oakland Villas	1711	-30	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Parkgate	1424	550	This WWTWs has been pumped away for AIR11
Portglenone (WWTW)	1449	-902	The Design Pe of this site was updated following additional information from Ops
Seacon	1122	3	This WWTWs was upgraded for AIR11
Springhill Road(1)	1713	-4	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Stewartstown	1599	-596	This WWTWs was upgraded for AIR11
Toome (WWTW)	1427	763	This WWTWs has been pumped away for AIR11
Tulnacross Road(44-46)	1820	-3	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Upperlands (WWTW)	1642	-650	The Design Pe of this site was updated following additional information from EP
Aghory	2547	-23	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Annaghmore (WWTW)	2556	-666	This WWTWs was upgraded for AIR11
Annaghugh (WWTW)	2602	-80	This WWTWs was upgraded for AIR11
Ballycoshone	2689	-3	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Ballyward	2120	-3	This WWTWs was upgraded for AIR11
Brantry	2832	-8	The Design Pe of this site was updated following additional information from EP
Carrickrovaddy	2257	-25	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Coalisland	2828	-882	This WWTWs was upgraded for AIR11
Derrymore (WWTW)	2401	-250	The Design Pe of this site was updated following additional information from Ops
Derrytrasna	2402	-175	This WWTWs has been upgraded for AIR11
Drumnaferry	2405	-135	This WWTWs was upgraded for AIR11
Drumhillery	2574	-36	This WWTWs was upgraded for AIR11
Eglish (Tyrone)	2843	-193	The Design PE for this site was updated following a reverse engineering exercise by APT
Farmacaffley	2579	-32	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Feumore (WWTW)	2406	70	This WWTWs was upgraded for AIR11
Katesbridge Road(79-85)	2110	-3	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Killyman	2847	322	This WWTWs has been pumped away for AIR11
Lisnalea	2274	-30	This WWTWs was upgraded for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Lower Ballinderry	2410	-673	This WWTWs has been upgraded for AIR11
Lurganare	2298	-138	This WWTWs was upgraded for AIR11
Madden (WWTW)	2587	195	This WWTWs was upgraded for AIR11
Maghery (WWTW)	2414	90	This WWTWs was upgraded for AIR11
Maytown Road	2275	-3	This WWTWs was upgraded for AIR11
Milltown (Benburb)	2550	362	This WWTWs has been pumped away for AIR11
Moneyslane (WWTW)	2151	-201	The Design PE for this site was updated following a reverse engineering exercise by APT
Dungannon	2850	6708	The Design Pe of this site was updated following additional information from EP
Mullaghbane (Armagh)	2594	-18	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Mullaghglass (Newry)	2280	-17	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Mullaghmore	2281	-40	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Rathfriland (WWTW)	2713	1586	The Design Pe of this site was updated following additional information from Ops
Redford	2853	-63	The Design Pe of this site was updated following additional information from consultants, McAdam Design

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Saval More Cottages	2715	-29	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Lisnagade Road(54-56)	2161	-1	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Soldierstown	2431	-15	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Ardground	2996	-25	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Arvalee	3003	-36	This WWTWs was upgraded for AIR11
Ballymonie	3019	-20	This WWTWs was upgraded for AIR11
Ballyquinn (WWTW)	3021	-63	This WWTWs was upgraded for AIR11
Bready (WWTW)	3971	-200	The Design Pe of this site was updated following additional information from Ops
Castlemellan Upper	3044	-14	The Design Pe of this site was updated following additional information from Ops
Claudy	3054	-592	The Design Pe of this site was updated following additional information from Ops
Derryaghna	3073	-1	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Derrylin (WWTW)	3075	830	This WWTWs was upgraded for AIR11

Name of Works	CAR ID	Change in Pe (-Ve AIR11 PE Higher)	Comments
Donagheady (WWTW)	3079	-200	This WWTWs was upgraded for AIR11
Drummack	3094	-2	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Dungiven	3101	-3742	This WWTWs was upgraded for AIR11
Ederney (WWTW)	3106	-98	The Design Pe of this site was updated following additional information from APT
Feeny	3110	-355	This WWTWs was upgraded for AIR11
Glenmornan	3121	-33	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Killaloo	3142	-60	This WWTWs was upgraded for AIR11
Legaghory	3157	-18	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Myroe (WWTW)	3198	-4	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Rousky	3214	-113	This WWTWs was upgraded for AIR11
Scribbagh (WWTW)	3216	-5	The Design PE for this site was amended with maximum capacity of the works rather than the WOC Design Pe as reported in AIR10
Clady (Tyrone)	4149	-84	The Design Pe of this site was updated following additional information from Ops
	Total	-10981	Change in Line 9 PE since AIR10

The change in Pe equates to a reduction in load of **0.7 t BOD/day** (i.e. 10981 x 60 for 60g/hd/day /1000/1000) from AIR10 to AIR11, allowing for rounding up and down and conversions.

Difference between AIR11 and AIR10:

Line 9 for AIR10 -	126.3
Line 9 for AIR 11 -	127.0
Total Difference -	0.7 increase

The confidence grade for line 9 remains as A2 (as for AIR10), 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. Hence a small reduction in confidence grade i.e. A2 is viewed as necessary to reflect this uncertainty, especially as 709 WWTWs are listed as having a PE of less than 100.

PPP Only Table

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 3 - Total load receiving primary treatment only

Line 4 - Total load receiving preliminary treatment only

No change; the PPP works all provide secondary treatment as a minimum level of Treatment.

Line 5 - Total load entering sewerage system

With reference to the AIR10 Reporter's Recommendation 'Commentary for Line 15 should be explicit regarding sewage load for PPP entering the system and/or clarity be sought regarding greyed out cell in PPP table.', 'N/A' was entered for this line in AIR10 as it was stated that the PPP Contractors do not operate the catchments.

However to ensure alignment with the approach to this line, for the 'NIW only' WWTWs, and to ensure the consideration of the catchments served by the PPP WWTWs, AMS has used the PPP WWTWs' PEs to populate this line.

Note the NIAUR definition of this line is 'This is the total pollution load in tonnes BOD/year that is discharged to the sewerage system. The total load includes load from domestic population, trade effluent, tankered loads and holiday population. Include loads discharged directly to sewage treatment works. Load shall be allocated between the NIW only and PPP tables on the basis of responsibility for the receiving works.' However as the only information available

to NIW regarding the load discharged to the sewerage system is the PEs measured at the PPP WWTWs, then the latter has been populated for this line.

A confidence grade of B3 has been assigned to this line, to reflect that of the PPP WWTWs PEs.

Line 6 - Total load entering sewerage system

The change in the Equivalent Population Served (resident) receiving treatment reflects the change in load received from the NIW Catchments.

Line 7 - Total load entering sewerage system

As all the PPP WwTWs have numerical consents, the change reflects the same change in Line 6 above for the same reasons.

Line 8 - Number of sewage treatment works

No change. The same number of WwTWs are operated by PPP contractors.

Line 9 - Treatment capacity available

No Change from AIR10. The same treatment capacity exists.

Specific Commentary Requirements:

- Assumptions Made:
 - 60g/h/d as per NIAUR requirements
- BOD loading is based on the influent sample result of loading applied to the WWTW processes.
- Sludge production is based on the records of actual sludge imported to treatment or disposal centres.
- 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 AIR11 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.

Confidence Grades for Total - Lines 2 - 9

The Asset Management Section (AMS) has reviewed the proposed confidence grades pertaining to the 'NIW only' and 'PPP' tables, whilst considering the line values:

- Line 2 – Maintain NIW's C3 as NIW's value contributes to 84% of the total value.
- Line 3 – Maintain NIW's C3 as PPP has no contribution to the total value.
- Line 4 – Maintain NIW's C3 as PPP has no contribution to the total value.
- Line 5 – Maintain NIW's C5 as NIW's value contributes to 84% of total value.

Line 6 – Maintain NIW's C5 as NIW's value contributes to 84% of total value.

Line 7 – Maintain NIW's C5 as NIW's value contributes to 84% of total value.

Line 8 – Maintain NIW's A2 as NIW's value contributes to the greater percentage of the total value.

Line 9 – Maintain NIW's D3 as NIW's value contributes to the greater percentage of the total value.

Sludge Disposal (NIW only)

Line 14 - Percentage unsatisfactory sludge disposal

Northern Ireland Water (NIW) continues to have zero unsatisfactory sludge disposals. NIW has again assigned a confidence grade of A1 to percentage unsatisfactory sludge disposal as the total is zero.

Line 15 - Total sewage sludge produced

For the purpose of AIR 11 submission Table 15 (NIW Only) relates to sewage sludge produced for 2010/11 (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 C018.

Line 16 - Total sewage sludge disposal

Northern Ireland Water disposes the same amount of sludge as that produced (Line 15). NIW remains committed to compliance with the requirements of the "Safe Sludge Matrix". A total of 97.9% of sewage sludge to PPP during 2010/11. The total estimated quantity of grit and screenings removed as part of the sewage treatment process and disposed of separately under Tender C018 (Collection, Transportation and Disposal of Waste by skip) has been collated as well as the total disposed to landfill in 2010/11.

Sludge disposal (PPP only)

Line 14 - Percentage unsatisfactory sludge disposal

No change – the PPP Contractor has confirmed that all sludges were disposed of through authorised routes.

Line 15 - Total sewage sludge produced

The Changes in sludge produced data reflect a mix of new methodologies and record keeping systems for liquid and cake movements (as demanded by the Omega contract payment processes), and the loads delivered to the PPP contractor from the NI Water sewer network, outside the PPP contractor's control.

The variations are tabulated below;

PPP Production	AIR11	AIR10
	Armagh WWTW	0.759
Richhill WWTW	0.213	0.21
Ballynacor WWTW	2.468	2.29
Ballyrickard WWTW	1.627	1.717
NDA WWTW	1.753	1.654
Kinnegar WWTW	0.792	0.7

Line 16 - Total sewage sludge disposal

In AIR10 the PPP Only table reported on a limited amount of sludge disposed off under a contract side agreement that saw the Omega Contractor take over Ballynacor Sludge Disposal Facility 6 weeks in advance of Service Commencement.

This year's data represents a full year of PPP disposal, hence the significant change in data recorded.

Sludge Disposal (Total)

Line 14 - Percentage Unsatisfactory Sludge Disposal

No change – NI Water confirms that all sludges were disposed of to land fill (grit and screenings) or to the PPP Contractor.

The PPP Contractor has confirmed that all sludges received were disposed of through authorised routes.

Consequently 0% sludges were unsatisfactorily disposed of.

Line 15 - Total Sewage Sludge Produced

NI Water produced 29.9 ttds of sewage sludge and 0.6 ttds of grit and screenings. This is consistent with the data in Table 17g.

The PPP contractors produced 7.6 ttds of sewage sludge consistent with data in Table 42.

In total 38.1 ttds was produced from Sewage Treatment services.

Line 16 - Total Sewage Sludge Disposal

Line 16 Total is not a summation of Line 16 NIW and Line 16 PPP Only for the following reasons;

NI Water produced 29.9 ttds of sewage sludge which was disposed of to the PPP contractor consistent with Table 17g.

The same 29.9 ttds was disposed of **by** the PPP contractor, in addition to the 7.6 ttds generated by the PPP contractors, giving a total of 37.5 ttds disposed of by the PPP contractor.

A further 0.6 ttds of grit and screenings was disposed of by NI Water to land fill.

Consequently, a Total of 38.1 ttds of sludge was disposed of from all Sewage Treatment services.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 16 NON FINANCIAL MEASURES
SEWERAGE SERVICE ACTIVITIES (NIW Only)

DESCRIPTION	UNITS	DP	2		3		4		4		
			REPORTING YEAR	CG							
			2007-08		2008-09		2009-10		2010-2011		
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
2	Total length of "critical" sewers	km	2	2,467.00		2,469.01	C4	2,889.10	C4	3,653.62	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	"Critical" sewers - inspection by CCTV/man entry	km	2	5.47	A3	31.06	C4	40.43	C4	86.89	B3
5	"Critical" sewers - renovated	km	2	1.82	A3	3.15	A3	0.81	A2	9.40	A2
6	"Critical" sewers - replaced	km	2	3.61	A3	2.813	A3	5.07	A2	6.50	B3
7	Abandoned "critical" sewers and other changes	km	2	0.00	A2	-407.05	C4	0.00	A2	0.05	A2
8	New "non-critical" sewers	km	2	41.11	A3	135.88	B3	153.48	B2	195.62	B2
9	"Non-critical" sewers - renovated	km	2	1.13	A3	0.75	A3	1.38	A2	6.26	A2
10	"Non-critical" sewers - replaced	km	2	8.91	A3	5.42	A3	6.19	A2	4.58	B3
11	Abandoned "non-critical" sewers and other changes	km	2	0.99	A3	410.24	A3	0.49	A2	0.09	A2
12	Sewer collapses per 1,000km	nr	1	47.3	B4	96.3	C5	68.7	C5	84.9	B2
13	Sewer blockages per 1,000km	nr	1	1,181.0	B4	1,936.4	C5	1,791.0	C5	1,759.8	B2
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	Total length of "critical" sewers	km	2	2,469.0	C4	2,889.1	C4	3,653.6	C3	3,622.52	C3
D INTERMITTENT DISCHARGES											
16a	Number of unsatisfactory intermittent discharges excluding CSOs (EHS)	nr	0	441	C4	85	A2	192	C2	218	C2
16b	Number of unsatisfactory intermittent discharges CSOs (EHS)	nr	0	408	C4	270	A2	381	C2	379	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
17b	Number of CSOs	nr	0	799	B4	814	B4	751	B4	748	B4
E DRAINAGE AREA PLANS											
18	Cumulative number of drainage area plans completed	nr	0	49	A1	54	A1	70	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
20	Total sewerage drainage areas	nr	0	109	A2	109	A2	269	A2	260	A2
21	Cumulative % drainage area plan studies completed	%	1	45.0	A1	49.5	A1	26.0	A2	27.3	A2
22	% population/properties covered by completed studies	%	1	43.0	A2	46.0	A2	49.6	C4	55.1	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
24	Delivery of improvements to WWTW through nominated schemes as part of a defined programme of work	nr	0							20	B3
25	Investment in improvements to small wastewater treatment works as part of the rural wastewater investment programme	£m	1							8.1	A2

Table 16 – Sewerage Service Activities**General**

The Reporter recommended consolidation of Table 16 commentaries to improve visibility and avoid possible conflicts. To this end the Asset Management Section (AMS) has co-ordinated the input into this table from a number of sources.

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 AIR10 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).

The AIR10 Reporter's Recommendations

With reference to the Recommendation 'Consider reconciliation of data with the processes used for the compilation of Line 3.', Developer Services have met with the Finance colleagues to resolve the matter of double counting and fine tune the quality assurance procedures leading to one report from a single source.

With reference to the Recommendation 'The study to better identify critical sewers completed by a consultant does not seem to take account of the Reporter's AIR09 recommendation regarding upstream/downstream unknown depth although the commentary indicates the company has taken this recommendation on board. Clarity should be sought.' Although the consultant's report did not specifically refer to the upstream/downstream unknown depths, this criteria is included in NIW's Map Basic GIS code for determining critical sewers.

Line 1 - Total length of sewers at 1 April

1	Total length of sewers	km	2	14745.61	B3
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The value of 14745.61km has been extracted from line 14 of the AIR10 Table 16.

Line 2 - Total length of 'critical' sewers at 1 April

2	Total length of "critical" sewers	km	2	3653.62	C3
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The value of 3653.62 km has been extracted from line 15 of the AIR09 Table 16.

General Commentary from Engineering & Procurement (EP) Procurement Business Unit

Lines 3 to 11

3	New "critical" sewers	km	2	13.85	A2
4	"Critical" sewers - inspection by CCTV/man entry	km	2	15.53	A2
5	"Critical" sewers - renovated	km	2	9.40	A2
6	"Critical" sewers - replaced	km	2	4.42	A2
7	Abandoned "critical" sewers and other changes	km	2	0.05	A2

8	New "non-critical" sewers	km	2	27.96	A2
9	"Non-critical" sewers - renovated	km	2	6.26	A2
10	"Non-critical" sewers - replaced	km	2	2.99	A2
11	Abandoned "non-critical" sewers and other changes	km	2	0.09	A2

The above table depicts lengths and confidence grades obtained from EP.

Lines 3 to 11

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 Category 4 and 5. 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.

EP Input to Lines 3, 4, 5, 6, 7

All information is compiled from EP sewerage infrastructure monthly returns. This is an accurate measurement of the actual lengths of 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.

EP Input to Lines 8, 9, 10, 11

All information is compiled from EP sewerage infrastructure monthly returns. This is an accurate measurement of the actual lengths of 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 totals reported for new critical, new non-critical and non-critical replaced include an amount of sewers laid during the AIR10 reporting period. Notification of these sewers was not received to enable inclusion in the AIR10 submission. They have been included in the AIR11 totals to provide a true figure for the asset balance.

General Commentary from Customer Services Directorate (CSD) - Developer Services

Lines 3 & 8

3	New "critical" sewers	km	2	2.334	B3
8	New "non-critical" sewers	km	2	167.663	B2

The above table depicts lengths and confidence grades obtained from Developer Services.

Line 3 is on-site and off-site sewers servicing new development and is dependant to a large degree on the housing market. No significant change from AIR10.

Line 8 is predominantly adoptions of sewers within housing developments – which clearly is also dependent upon the housing market. A significant increase is evident from AIR10. This is due to the pressure on Developers from Bond Security providers who are pressing for sewer adoptions and release of Bond Securities

Introduction

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 Developer 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.

General Commentary from Customer Services Directorate (CSD) - Networks Sewerage

Line 4

4	"Critical" sewers - inspection by CCTV/man entry	km	2	29.85	C4
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The above table depicts lengths and confidence grades obtained from Networks Sewerage.

Changes during the 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 should be in a better position for AIR12 to report on whether collapses or blockages have occurred in a private lateral, public lateral or public main sewer.

Calculation Process

Data gathering and calculation is as described below in the Line- Specific Methodology Statements for Table 16a: Line 4b.

For T16 L4

Table 16: Line 14: Total length of sewers at 31 March 2011

Table 16: Line 15: Total length of 'critical' sewers at 31 March 2011

Total length of sewers inspected by CCTV.

This information is gathered by Networks Sewerage Field managers using checked and paid invoices from the Sewer Maintenance Contractor and submitted through line management on an excel spreadsheet to Networks Sewerage Business Unit on a monthly basis.

The percentage length of critical sewers against the total length of sewers is calculated by using the total length of critical sewer divided by the total length of sewer ($T16L15/T16L14*100$) = percentage%.

The total length of all sewers inspected by CCTV is then multiplied by this percentage. This figure will equal in rough terms to the length of 'Critical' sewer inspected by CCT.

Line 4: Critical Sewers - Inspection by CCTV/man entry

As critical sewers have only recently been recorded in the Corporate Asset Register (CAR) Networks Sewerage are unable to identify which critical sewers have been inspected in the reporting year, therefore an assumption is used to produce a figure for Line 4b (see Line-Specific Methodology Statement)

The figures submitted by Asset Management for T16 lines 14 and 15 are used to derive the percentage of Critical sewers against the total length of sewers this percentage is then used to apportion the total length of sewers inspected into Critical and non-critical.

Calculation

Table 16 Line 15 / Table 16 Line 14 * 100 = percentage% of Critical Sewers

Total length of Sewers inspected by Networks Sewerage for 10-11 =

154.75 Km * percentage% of Critical Sewers =

Critical Sewers inspected by CCTV (Networks Sewerage)

Confidence Grading

Line 4 is given a grading of C4 as an assumption had to be made on the length of critical sewer surveyed. NIW expect this to improve further as we move forward into AIR12 as report building continues with the single Sewer Maintenance Contractor.

General Commentary from Asset Performance Networks Sewerage Line 4

4	"Critical" sewers - inspection by CCTV/man entry	km	2	41.51	A2
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The length of CCTV survey of critical sewers has more than doubled from the AIR 10 figure. It should be noted that those CCTV surveys executed by Assets Directorate were not included within the AIR10 submission.

In relation to CCTV surveys executed within CSD, for AIR12 NIW proposes to report actual CCTV/man entry of critical sewers from NIW's Corporate Asset Register i.e. CCTV completed as held on the critical sewer layer. NIW should be in a better position for AIR12 to report more accurately on the above.

Commentary from CSD for Lines 5-7 and 9-11 – Operations Services
(‘b’ depicts information from Operations Services)

Line 5b: "Critical" sewers – renovated (CSD only)

Line 6b: "Critical" sewers – replaced (CSD only)

Line 7b: Abandoned "critical" sewers and other changes (CSD only)

Line 9b: "Non-critical" sewers – renovated (CSD only)

Line 10b: "Non-critical" sewers – replaced (CSD only)

Line 11b: Abandoned "non-critical" sewers and other changes (CSD only)

5b	"Critical" sewers - renovated (CSD only)	km	2	n/a	
6b	"Critical" sewers - replaced (CSD only)	km	2	2.08	C4
7b	Abandoned "critical" sewers and other changes (CSD only)	km	2	n/a	
8	New "non-critical" sewers	km	2		
9b	"Non-critical" sewers - renovated (CSD only)	km	2	n/a	
10b	"Non-critical" sewers - replaced (CSD only)	km	2	1.59	C5
11b	Abandoned "non-critical" sewers and other changes (CSD only)	km	2	n/a	

Background

Within the Customer Service Delivery Directorate, three functions had been identified, in the past, as having the potential to be involved in one or more of the sewerage service activities covered by Lines 3b to 11b of Table 16. The three functions then were Networks Sewerage, the Operations Contract Management Centre (OCMC) and Tactical Asset Management (TAM).

Each function was asked in 2009 if it would have any involvement in the list of activities. As a result of this exercise, Networks Sewerage confirmed its involvement in Line 4b: "Critical" sewers – inspection by CCTV/man entry (CSD only) whilst TAM confirmed its involvement in Line 3b: New "critical"

sewers (CSD only) and Line 8b: New "non-critical" sewers (CSD only). The identification of these providers of information within CSD enabled NI Water to make a more complete return on Lines 3, 4 and 8 in 2008/09 and 2009/10.

In 2011, information on sewers replaced has been provided by all three of the Networks Sewerage areas. The information for the East area has been apportioned under the headings of "Critical" Sewers Replaced and "Non-Critical" Sewers Replaced by applying the percentages of total length of sewers identified as being "critical" and "non-critical".

Table 16 Line 15: Total length of "critical" sewers = 3,622.52 km

Table 16 Line 14: Total length of sewers = 14,904.68 km

"Critical" Sewers Percentage = $(T16 L15 / T16 L14) \times 100 = 24.3\%$

"Non-Critical" Sewers Percentage = $100 - 24.3 = 75.7\%$

Networks Sewerage Area	Length of Sewers Replaced (km)	Length of "Critical" Sewers Replaced (km)	Length of "Non-Critical" Sewers Replaced (km)
East	0.9265	<i>0.23 (Estimate)</i>	<i>0.70 (Estimate)</i>
North	1.12	0.80	0.32
South West	1.624	1.05	0.57
Total	3.6705	2.08	1.59

There remain a number of activities covered by lines in Table 16 in which no function within CSD has had any involvement.

Going forward, OCMC will report to the Networks Sewerage Business Unit on Table 16 Lines 5b, 6b, 9b and 10b which in turn will be reported to Asset Management for the AIR12 submission.

Figures

The confirmed lengths of "critical" and "non-critical" sewers replaced by CSD in 2010/11 are as follows:

Table 16 Line 6b: "Critical" sewers – replaced (CSD only) = **2.08 km**

Table 16 Line 10b: "Non-critical" sewers – replaced (CSD only) = **1.59 km**

Ops Services has input "not applicable" against lines 5b, 7b, 9b and 11b. This implies that sewerage service activities relating to renovated and abandoned "critical" and "non-critical" sewers are not applicable to CSD and reflects the responses from the three functions.

Ops Services cannot input "0" because the suggestion would be that the activities apply to CSD but no work was undertaken in 2010/11. And Ops Services cannot input "not counted" because the suggestion would be that work was undertaken by CSD but wasn't measured.

Confidence Grading

Line 6b is given a grading of C4 and Line 10b is given a grading of C5 as assumptions had to be made regarding the lengths of "critical" and "non-

critical" sewers replaced in the East area. NI Water expects these gradings to improve for AIR12 as report building continues with the single Sewer Maintenance Contractor.

General Comment by Asset Performance

Lines 5, 6, 9 and 10.

These lines define the amount of sewer renovation being executed by NIW. The PC10 Final Determination includes defined outputs for this activity.

The aggregate length of sewer renovation is 23.1 km which compares with the output target of 23.2 km within the Final Determination.

Overall Confidence Grades to Lines 3 to 11

Confidence grade for Line 3 - Since the New "critical" sewers laid by EP represents 85% of the total laid by NIW during AIR11, the confidence grade against the total has been updated to A3, allowing for the mix of an A2 and B3.

Confidence grade for Line 4 - Line 4 is 66% of information from EP and Asset Performance with a confidence grade of A2. Hence the overall confidence grade is being reduced to B3 to allow for the 34% from CSD at the lower grade of C4.

Confidence grade for Line 6 - Line 6 is 68% of information from EP with a confidence grade of A2. Hence the overall confidence grade is being reduced to B3 to allow for the 32% from Operations Services at the lower grade of C4.

Confidence grade for Line 8 - Since the New "non-critical" sewers laid by Developer Services represents 85% of the total laid by NIW during AIR11, the confidence grade against the total has been maintained as that proposed by the latter i.e. B2, allowing for the mix of an A2 and B2.

Confidence grade for Line 10 - Line 10 is 65% of information from EP with a confidence grade of A2. Hence the overall confidence grade is being reduced to B3 to allow for the 35% from Operations Services at the lower grade of C4.

Confidence grades for Lines 5, 7, 9 and 11 - The confidence grades as submitted by EP have not been altered by AMS as CSD has stated no entry against these lines.

Lines 12 and 13

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 should be in a better position for AIR12 to report on whether collapses or blockages have occurred in a private lateral, public lateral or public main sewer.

Calculation Process

Data gathering and calculation is as described below in the Line- Specific Methodology Statements for Table 16: Lines 12 and 13.

For Table 16 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 2011

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 2011 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.

For Table 16 Line 13

Table 16A: Line 3: Total number of sewer blockages

Table 16: Line 14: Total length of sewers at 31 March 2011

The number of sewer blockages is divided by the total length of sewers at 31 March 2011 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, see Line-Specific Methodology Statement, 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, see Line-Specific Methodology Statement, 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

Because NIW are using data from checked and paid invoices the confidence grade for the AIR11 is now at B2. NIW expects this to consolidate as we move forward into AIR12 as report building continues with the single Sewer Maintenance Contractor.

General Commentary from Asset Information Centre

Line 14

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 have been no significant improvements in data quality since the AIR10 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. There were no specific recommendations from the reporter for these lines following last year's submission.

Line 15

Differences in data between current and previous year

A reporter recommendation to report sewers with a known shallow depth either upstream or downstream but no known complementary depth as 'non-critical' has been taken on board for this year's analysis. This recommendation has led to 2386Km of sewers with a previously unknown criticality being reclassified as "non-critical". Where as this has no direct effect on the figure for critical sewers it may affect totals in other reporting lines where the total of non-critical sewers has been used to proportionate an estimated figure.

There has been a slight decrease in the estimated total critical sewer length this year compared to last year due to a variance in the 3rd party data used to identify critical sewers. In the AIR 10 returns the critical sewer total was calculated by Atkins Global on behalf of NIW. This analysis assessed 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 year the same analysis techniques were applied in house by NIW and the final figure has decreased by 34.16Km. There are 3 main factors to consider when assessing this change.

- The result of this analysis is dependant on 3rd party GIS datasets such as buildings and watercourse data from LPS, Roads Service traffic sensitive streets and Translink's railway data. As the quality of these datasets changes the estimated figure for critical sewers will also change.
- When assessing sewer criticality this year NIW has used a more accurate watercourses dataset. This gives a superior accuracy level of watercourse location which in turn provided more accurate estimations.
- Updated information on existing sewers is often submitted along with as constructed records of new sewers. As better location, depth and material information is obtained on sewers their criticality may be subject to change.

With the critical sewer analysis now being performed in house NIW is confident that a uniform approach has been applied using the best available 3rd party datasets. However as the result of the analysis the confidence grade of C3 will remain in place.

General Commentary from Asset Performance Networks Sewerage 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.

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.

The estimated number of Pumping Station UIDs has been revised from 192 in AIR10 to 218 as a consequence of the percentage classified as unsatisfactory to date being revised from 47 to 52.2%; this percentage is derived from a database of intermittent discharges produced by Atkins.

The corresponding numbers of UIDs as recognised by NIEA for classification **to date** are:

- The number of unsatisfactory intermittent discharges excluding CSOs (EHS) - 59 UIDs;
- The number of unsatisfactory intermittent discharges CSOs (EHS) - 203 UIDs.

General Commentary from the Asset Performance Team (APT) Above Ground – Sewerage System Intermittent Discharges Lines [17a and 17b]

Table A - Depicting differences between the sewerage system overflows between AIR10 and AIR11

Intermittent Discharges	APT Preliminary AIR10 Number	AIR10 Number (after removal of Dual, Duplicates and Bifurcation Assets)	APT Preliminary AIR11 Number	Total Number of Dual, Duplicates and Bifurcation assets to be removed	AIR11 Number (after removal of Dual, Duplicates and Bifurcation Assets))	Difference between AIR10 & AIR11 (after removal of Dual, Duplicates and Bifurcation Assets)
Combined Storm Overflows (CSOs)	819	751	812	-64	748	-3
Sewage Pumping Stations (SPSs)	951	933	977	-16	961	28
Total Number of Intermittent Discharges	1770	1684	1789	-80	1709	25

Hence for AIR11 the total number of Sewerage System Overflows is 748+ 961 i.e. 1709

From the APT data used there has been a preliminary net decrease of 7 No: CSOs since AIR10 (i.e. 819 to 812). This is made up of 5 No: new CSOs minus 12 No: CSOs that have been removed.

In addition there has been a preliminary net increase of 26 No: SPS overflows since AIR10 (i.e. 951 to 977). This is made up of 30 No: new SPSs overflows minus 4 No: SPSs overflows that have been removed.

Preliminary net decrease of 7 No: CSOs since AIR10

Preliminary net increase of 26 No: SPS overflows since AIR10

Preliminary total increase of 19 No: overflows since AIR10 (i.e. 1770 to 1789).

(For a further breakdown see Table B, C & D – Changes in Intermittent Discharges by Drainage Area below)

The total number of consented assets held by NIW is 1789. However as in AIR10 a number of these assets (80no.) are not included in the finalised number. This is because these are duplicates, dual manholes or bifurcation manholes which do not fall within the industry standard for reporting purposes.

The 80 No: sewerage system overflows have been categorised into the following:

- 44 No: Dual Manholes;
- 10 No: Bifurcation Manholes;
- 26 No: Duplicate Assets
(Consisting of 16 No: SPS overflows & 10 No: CSOs)

(For further details see Tables E, F & G below)

Overall this equates to a:

Net increase of 19 No: Preliminary overflows since AIR10

Plus: 1770 No: Preliminary overflows identified in AIR10

Sub Total: 1789 No: sewerage system overflows

Minus: 80 No: O/Fs not included in the finalised number for AIR11

Total: 1709 No: sewerage system overflows identified for AIR11

An exercise has been ongoing over the last couple of years to confirm the number of sewage system overflows within NIW and 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.

The consultants employed to carry out this work submitted their final conclusions in December 2010. This detailed assets that are currently consented that do not have overflows (144no (55 CSOs & 89 SPSs.)) and also assets which have overflows which are currently unconsented (138no (74

CSOs & 64 SPSs)). 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 8 catchments. This updated information has been included on GIS and submitted to NIEA with changes included in the AIR11 figures.

It is hoped that this process will be completed by AIR12 at which stage the information held on GIS will mirror exactly the status of assets on the ground as currently GIS has details of 78 SPSs with overflows and 194 CSOs that are not consented.

Table B – APT Preliminary changes in Intermittent discharges by drainage area for AIR11

Drainage Area	No of CSO's added since AIR10	No of CSO's removed since AIR10	No of SPS's added since AIR10	No of SPS's removed since AIR10	Comments
Annsborough	0	0	1	0	Castlewellan WWTW's has been abandoned and converted into a SPS and now pumps to Annsborough. Castlewellan Sew Syst App included into Annsborough APP.
Castlewellan	0	-3	0	-1	Please note that 4 entries that were within Castlewellan Catchment have been removed as they are duplicates with Annsborough.
Maguiresbridge	0	0	2	-1	Coolcannel SPS has been abandoned and removed from the application. In addition details of two pumping stations have been added to the application
Robinsontown	0	0	1	0	Birchwood Grange SPS added to application. All details pertaining to SPS supplied by Developer services south.
Hooks Corner	0	-1	0	0	All details pertaining to Hooks corner have been removed as Hooks corner WWTW's has been abandoned and a new SPS constructed which pumps to New Holland
New Holland (Lisburn)	0	0	1	0	Details pertaining to Hooks corner have been added to the New Holland application as Hooks Corner WWTW's has been abandoned and a new SPS constructed which pumps to New Holland
Caledon	0	0	1	0	New SPS Castle Lane SPS (Kilgowney Manor) added to application
Limavady	0	0	1	0	Limavady application updated to include Roeville Terrace SPS Included as result of pollution incident.

Drainage Area	No of CSO's added since AIR10	No of CSO's removed since AIR10	No of SPS's added since AIR10	No of SPS's removed since AIR10	Comments
Ballyclare	1	0	1	0	Ballyclare application updated to include Toberdowney Manor SPS and amendments made to 5 other SPS's
Dungannon	0	0	1	0	Gortmerron Link Road SPS, added to application
Bangor	0	0	1	0	Details of one SPS, Shaftsbury Rd SPS, added as result of pollution incident
Newcastle	0	-7	0	0	CSO's all removed as per instructions from K Tosh (ER Section) due CSO's now being closed
Dundrum	0	0	2	0	Details of Downshire SPS and the Quays SPS added to application
Saintfield	0	0	1	0	Darragh Cross WWTW had been rationalised to a SPS and was now pumping to Saintfield. Details on the SPS received from McAdams design.
Omagh	0	0	1	0	Details of Tamlaght Rd SPS added to application
Kinnegar	0	0	1	0	Details of Leathem Square SPS added to application
Larne	1	0	1	0	Details of 3 SPS's amended & details of Brustin Lee SPS and Drains bridge CSO included
Belfast	1	0	0	0	Details of Ladas Drive CSO added as result of pollution incident 4/01/2011
Ballywalter	0	0	1	0	Details of Ballywalter Coastal SPS added to the application at the request of NIEA. This SPS was originally included in the WTTWW consent and is the terminal SPS for the works.
Banbridge	0	0	1	0	Details of new Oaklands SPS added to application
Ballynacor	0	0	1	0	Details of Kiln Lane SPS added to application

Drainage Area	No of CSO's added since AIR10	No of CSO's removed since AIR10	No of SPS's added since AIR10	No of SPS's removed since AIR10	Comments
Total Number of intermittent discharges added or removed since AIR10	3	-11	19	-2	
Net decrease in CSO's since AIR10	-8				There has been a net decrease of 8 No: CSOs since AIR10. This is made up of 3 No: new CSOs minus 11 No: CSOs that have been removed.
Net Increase in SPS's since AIR10			17		There has been a net increase of 17 No: SPS O/Fs since AIR10. This is made up of 19 No: new SPS O/Fs minus 2 No: SPS O/Fs that have been removed.

Table C – AIC Preliminary changes in Intermittent discharges by drainage area for AIR11

Drainage Area	No of CSO's added since AIR10	No of CSO's removed since AIR10	No of SPS's added since AIR10	No of SPS's removed since AIR10	Comments
Fivemiletown	0	0	2	-1	Addition SPSs - Edfield, CAR ID: SP002021967 & CAR ID: Cooneen Road Way, SP002022066 Withdrawn SPS – Cleen, CAR ID: SP002021968
Limavady	0	-1	2	-1	Withdrawn SPS - Coolestan CAR ID: SP002021708. Withdrawn CSO - Ballyclose St, CAR ID: CO000984145 Additional SPSs – Radison Roe Park , CAR ID: SP002021707, Bovally , CAR ID: SP002021726
Dundrum	0	0	1	0	Additional SPSs – Kieltys School SPS, CAR ID: SP002022512
Bushmills	0	0	1	0	Additional SPSs – Main Street Bushmills, CAR ID: SP002022976
Tamnamore	0	0	5	0	Additional SPSs – Tamnamore CAR ID: SP002021761, Clonmore Cottages CAR ID: SP002843453, Clonmore Road Clontyclay CAR ID: SP002021686, Cohannon Inn CAR ID: SP002021663, Derrylee South CAR ID: SP002021690
Trillick	1	0	0	0	Additional CSO – Trillick CSO, CAR ID: CO000984098
Portballantrae	1	0	0	0	Additional CSO – Coastguard Road Lissanduff CSO, CAR ID: CO000984757
Total Number of intermittent discharges added or removed since AIR10	2	-1	11	-2	
AIC Net Increase in CSO's since AIR10	1				There has been a net increase of 1 No: CSO since AIR10. This is made up of 2 No: new CSOs minus 1 No: CSOs that have been removed.
AIC Net Increase in SPS's since AIR10			9		There has been a net increase of 9 No: SPS O/Fs since AIR10. This is made up of 11 No: new SPS O/Fs minus 2 No: SPS O/Fs that have been removed.

Table D – Combined Totals of APT & AIC Preliminary changes in Intermittent discharges by drainage area for AIR11

	No of CSO's added since AIR10	No of CSO's removed since AIR10	No of SPS's added since AIR10	No of SPS's removed since AIR10
Preliminary APT number of intermittent discharges added or withdrawn since AIR10	3	-11	19	-2
Preliminary AIC number of intermittent discharges added or withdrawn since AIR10	2	-1	11	-2
Subtotals	5	-12	30	-4
Preliminary net increase or decrease in SPS & CSO's since AIR10	-7		26	
Preliminary total increase in sewage system overflows for AIR11	19			

Table E - Dual Manholes not included in the finalised number for AIR11

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	Caulside Park	Y	1
Bangor	NM001126465	CSO 3C	Y	1
Ballyrickard	NM001129028	CSO 08	Y	9
Ballyrickard	NM001129122	CSO 07	Y	
Ballyrickard	NM001130491	CSO 03	Y	
Ballyrickard	NM001130495	CSO 06	Y	
Ballyrickard	NM001130588	CSO 09	Y	
Ballyrickard	NM001130596	CSO 05	Y	
Ballyrickard	NM001130603	CSO 04	Y	
Ballyrickard	NM001134760	CSO 11	Y	
Ballyrickard	NM001138941	CSO 10	Y	
Lurgan	NM001229100	CSO 30	Y	
Lurgan	NM001229426	CSO 35	Y	
Lurgan	NM001230688	CSO 31	Y	
Lurgan	NM001231354	CSO 34	Y	
Lurgan	NM001231355	CSO 33	Y	

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
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	
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	

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
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 AIR11				44

Table F - Bifurcation Manholes not included in the finalised number for AIR11

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
Donaghadee	NM001109593	CS 28	Y	1
Bangor	NM001127144	CSO 8	Y	1
Ballyrickard	NM001143381	CSO 13	Y	1
East Belfast	NM001149057	CSO 84	Y	1
Greencastle	NM001170174	CSO 01 DOWNVIEW AVENUE CSO	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 AIR11				10

Table G - Duplicate Manholes not included in the finalised number for AIR11

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
Upper Falls Road	CO000984208	CSO 05	Y	2
Upper Falls Road	SP002022130	PS 01	Y	
Greencastle	CO000984373	CSO 04 FORTWILLIAM PARK NO.2 CSO	Y	7
Greencastle	CO000984373	CSO 11 SHORE ROAD NO.2 CSO	Y	
Greencastle	CO000984374	CSO 07 LOWWOOD PARK CSO	Y	
Greencastle	CO000984375	CSO 08 MOUNT VERNON CSO	Y	
Greencastle	CO000984377	CSO 03 FORTWILLIAM PARK NO.1 CSO	Y	
Greencastle	CO000984378	CSO 02 DUNLAMBERT PARK CSO	Y	
Greencastle	CO000984380	CSO 06 LANDSDOWNE ROAD CSO	Y	
Upper Falls Road	CO000984510	CSO 01	Y	1
Whitehouse	CO000984647	CSO 2a	Y	1
Donnybrewer (Eglington)	SP002021880	SPS 4a	Y	5
Donnybrewer (Eglington)	SP002021886	SPS 3a	Y	
Donnybrewer (Eglington)	SP002021887	SPS 2a	Y	
Donnybrewer (Eglington)	SP002021888	SPS 5a	Y	
Donnybrewer (Eglington)	SP002021891	SPS 1a	Y	
New Buildings	SP002021939	PS 01	Y	2

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
New Buildings	SP002021940	PS 02	Y	
Lurgan	SP002022218	NE PS	Y	1
Belfast	SP002022349	SPS 12a	Y	1
Newry	SP002022593	SPS 20a	Y	2
Newry	SP002022606	SPS 24a	Y	
Greenisland	SP002022781	SPS 5A	Y	2
Greenisland	SP002022784	SPS 3A	Y	
Antrim	SP002022840	SPS 12A	Y	2
Antrim	SP002022852	St James PS	Y	
Total No: of Duplicate Manholes not included in the finalised number for AIR11				26

**General Commentary from the Asset Performance Team (APT) Above
Ground – WWTWs Intermittent Discharges
Lines [17a and 17b]**

Table H - Total number of Overflows within WWTWs

	AIR10 Number	AIR11 Number
Total number of Overflows from within WWTWs	522	558

Hence for AIR11 the total number of overflows within WWTWs is 558

The overall number of WWTW overflows from AIR10 to AIR11 has had a net increase of 36 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 I to P below).

The increase in WWTW overflows in AIR11 is mainly due to works being upgraded and the roll out of the Rural Wastewater Investment Programme (RWWIP), which has resulted in numerous small works now having an overflow facility.

The changes in the number of overflows within WWTWs since AIR10 are as follows:

- 11 No: overflows within WWTWs withdrawn since AIR10.
(See Table I, J, K, & L below)
- 47 No: Additional overflows within WWTWs since AIR10.
(See Table M, N & O below)
- A net increase of 36 overflows since AIR10.

Table I - Overflows within WWTWs withdrawn since AIR10 due to works becoming a pump away in AIR11

NAME of Works	CAR ID	Status in AIR11	Withdrawn O/Fs Since AIR10
Darragh Cross (WWTW)	288	Pump away to Saintfield WWTW	-1
Seaforde (WWTW)	294	Pump away to Clough WWTW	-1
Parkgate	1424	Pump away to Antrim WWTW	-2
Toome (WWTW)	1427	Pump away to Creagh WWTW	-1
Killyman	2847	Pumpaway to Dungannon WWTW	-2
Milltown (Benburb)	2550	Pumpaway to Benburb WWTW	-1
Total No of overflows withdrawn since AIR09 due to the WWTWs becoming a pump away			-8

Table J - Overflows within WWTWs withdrawn since AIR10 due to works being upgraded

NAME of Works	CAR ID	Status in AIR11	Withdrawn O/Fs Since AIR10
Cloughmills (WWTW)	1096	Works Upgraded	-1
Total No of overflows withdrawn since AIR09 due to the works being upgraded			-1

Table K – Withdrawn Overflows within WWTWs due to incorrect designation in AIR10

NAME of Works	CAR ID	Status in AIR11	Withdrawn O/Fs Since AIR10
Ballywalter WWTW	217	As per NIEA request the application has been amended to delete any mention of a storm tank or Inlet PS. This detail of the SPS including storm storage is now included in the Ballywater Sewage System Consent under Ballywalter Coastal SPS	-1
Eglish (Tyrone)	2843	APT confirmed after site visit (Sept 10): that the pipe discharging from Eglish WWTW's is in fact a drainage pipe and not an overflow from the inlet pump sump as previously thought.	-1
Total No of Withdrawn Overflows due to incorrect designation in AIR10			-2

Table L– Summary of the total number of Overflows withdrawn since AIR10

Total No of overflows withdrawn since AIR10 due to the works becoming a pump away	-8
Total No of overflows withdrawn since AIR10 due to the works being upgraded	-1
Total No of Withdrawn Overflows due to incorrect designation in AIR10	-2
Combined Total No: of overflows within WWTWs withdrawn since AIR10	-11

Table M - Additional overflows within WWTWs since AIR10 due to WWTW upgrades

NAME of Works	CAR ID	Status in AIR11	Overflows for AIR11 from Process Info	Additional O/Fs Since AIR10
Ballyhalbert Old (Retention Tank)	215	Works Upgraded	1 No additional FFT O/F with Storm Retention	1
Drumaness (WWTW)	293	Works Upgraded	1 No additional inlet pumping station emergency O/F	1
Lisburn (New Holland)	329	Works Upgraded	1 No additional FA O/F and re-designation of the FFT O/F to reflect FFT O/Fs with Storm Retention	1
Bushmills (WWTW)	1178	Works Upgraded	1 No additional FA O/F PLUS FFT O/F now has Storm Retention	1
Cargan (WWTW)	1433	Works Upgraded	1 No additional FA O/F & 1 No additional Interstage PS EO	2
Martinstown	1445	Works Upgraded	Removal of 1 No FFT O/F which has now been re-designated as 1 No FFT with Storm Retention (which also act as PS E/O) and 1 No additional FFT O/F (which also act as PS E/O). Note 2 interstage PS on-site	1
Seacon	1122	Works Upgraded	1 No additional FA O/F & 1 No FFT O/F with Storm Retention	2
Stewartstown	1599	Works Upgraded	1 No additional FFT O/F 1 No additional Effluent E/O	2
Annaghmore (WWTW)	2556	Works Upgraded	1 No additional FA overflow. 1 No additional FFT overflow with Storm Retention 1 No Additional Final Effluent PS emergency overflow	3
Annaghugh (WWTW)	2602	Works Upgraded	1 No additional FA overflow. 1 No additional FFT overflow with Storm Retention 1 No Additional Final Effluent PS emergency overflow	3
Armagh Road(202-206)	2250	Works Upgraded	1 No additional FFT O/F	1

NAME of Works	CAR ID	Status in AIR11	Overflows for AIR11 from Process Info	Additional O/Fs Since AIR10
Ballyward	2120	Works Upgraded	1 No additional FFT O/F	1
Coalisland	2828	Works Upgraded	1 No additional Inlet PS Emergency overflow 1 No FFT overflow with Storm Retention	2
Drumnaferry	2405	Works Upgraded	1 No additional FA overflow. 1 No additional FFT overflow with Storm Retention	2
Drumhillery	2574	Works Upgraded	1 No additional FA overflow. 1 No additional FFT overflow with Storm Retention	2
Feumore (WWTW)	2406	Works Upgraded	1 No additional FA O/F PLUS FFT O/F now has Storm Retention	1
Lisnalea	2274	Works Upgraded	1 No additional FA overflow. 1 No additional FFT overflow with Storm Retention	2
Madden (WWTW)	2587	Works Upgraded	1 No additional FA overflow. 1 No additional FFT overflow with Storm Retention	2
Maghery (WWTW)	2414	Works Upgraded	1 No additional FA O/F PLUS FFT O/F now has Storm Retention	1
Maytown Road	2275	Works Upgraded	1 No FFT overflow with Storm Retention	1
Arvalee	3003	Works Upgraded	1 No additional FA overflow. 1 No additional FFT overflow with Storm Retention	2
Ballymonie	3019	Works Upgraded	1 No additional Inlet PS Emergency Overflow PLUS FFT O/F now has Storm Retention	1
Ballyquinn (WWTW)	3021	Works Upgraded	1 No additional FA overflow. 1 No additional FFT overflow with Storm Retention	2
Donagheady (WWTW)	3079	Works Upgraded	1 No additional FA overflow. 1 No additional FFT	2

NAME of Works	CAR ID	Status in AIR11	Overflows for AIR11 from Process Info	Additional O/Fs Since AIR10
			overflow with Storm Retention	
Feeny	3110	Works Upgraded	1 No additional Final Effluent PS Emergency Overflow 1 No FA overflow has now replace 1 No 3DWF O/F	1
Killaloo	3142	Works Upgraded	1 No additional FA overflow. 1 No additional FFT overflow with Storm Retention	2
Monea (WWTW)	3186	Works Upgraded	1 No additional FA overflow. 1 No additional FFT overflow with Storm Retention	2
Tattysallagh	3227	Works Upgraded	1 No additional FA overflow. 1 No additional FFT overflow with Storm Retention	2
Total No: of additional overflows since AIR10 due to WWTWs being upgraded				46

Table N - Additional overflows within WWTWs due to incorrect designation in AIR10

NAME of Works	CAR ID	Status in AIR10	Changes in Overflows for AIR10 from Process Info	Additional O/Fs Since AIR09
Newtownstewart (WWTW)	3202	Partial Review of Water Order Consent by ER	1 No additional FFT O/F with Storm Retention	1
Totals No: of additional overflows within WWTWs due to incorrect designation in AIR10				1

For AIR11 - 2 No: Overflows has been withdrawn (see Table K) and 1 No: additional overflow has been included (see Table N above). This is result of overflows being incorrectly being designated in AIR10. This equates to net increase 1 No: overflows due to incorrect designation for AIR11.

Table O – Summary of additional overflows within WWTWs since AIR10

Total No: of additional overflows since AIR10 due to works being upgraded	46
Totals No: of additional overflows within WWTWs due to incorrect designation in AIR10	1
Combined Total: of Additional overflows within WWTWs since AIR10	47

Table P – Summary of Overflow type within WWTWs

Overflow Type	AIR10 Overflows from WWTWs	AIR10 Overflows listed for comparison purposes with AIR09	AIR11 Overflows from WWTWs	AIR1 Overflows listed for comparison purposes with AIR10	Difference between AIR10 & AIR11
Formula "A" O/Fs only	129	140	143	156	16
Formula "A" O/Fs (which also act as PS E/O)	10		12		
Formula "A" O/Fs with Storm (which also act as PS E/O)	1		1		
FFT O/Fs only	142	254	134	271	18
FFT O/Fs (which also act as PS E/O)	17		18		
FFT O/Fs with Storm Retention	84		108		
FFT O/Fs with Storm Retention (which also act as PS E/O)	11		11		
3 DWF	20	20	18	18	-2
Additional Overflows-storm	7	108	7	113	5
Additional Overflows-other structures	6		6		
Additional Overflows-pumping station E/O	95		100		
Total No of WWTWs Overflows	522	522	558	558	37

Since AIR10 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 ongoing 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 961, and the total number of overflows within WWTWs of 558) is 1519.

Comparison between AIR10 & AIR11 - Intermittent discharges excluding CSOs

The number of intermittent discharges excluding CSOs in **AIR10 was 1455**. This is made up 522 WWTW O/Fs + 933 SPS O/Fs.

In comparison the number of intermittent discharges excluding CSOs in **AIR11 has increased by 64 No: intermittent discharges to 1519**.

The net increase in the number of intermittent discharges excluding CSOs is due to a net increase of 36 No: WWTW overflows and a net increase of 28 No: SPS overflows since AIR10. 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 748.

Comparison between AIR10 & AIR11– CSOs in the Sewerage System

The number of CSOs in the sewerage system has had a **net decrease of 3 No: CSOs since AIR10** i.e. (751 in AIR10 – 748 in AIR11).

This net decrease previously discussed is mainly due to ongoing NIW upgrades to the sewerage system network.

General Commentary from the Asset Performance Networks Sewerage Lines 18, 19, 20, 21 and 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.

Comment

The 5-year framework agreement, through which Drainage Area Study work was procured by NIW, expired in October 2010 – and has not yet been replaced by an alternative procurement mechanism.

As a consequence, no significant Drainage Area Study work has been executed in year 10/11.

Bangor is the one network which has been added to the 'completed' list.

In anticipation of a new procurement mechanism 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).

Line 20 – Total sewerage drainage areas

Again we have included all networks with population equivalent greater than 250 i.e. 260 no.

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.

DRAINAGE AREA STUDY PROGRAMME STATUS AT APRIL 2011

<u>Catchment</u>	<u>Domestic population</u>	<u>DAP date</u>
CATEGORY A DAS's COMPLETED SINCE 2003		
Initial DAS		
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

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
Moirá	4342	Apr-03
Lurgan*	26512	Apr-03
Rathfriland	2724	Nov-03
Bessbrook*	3000	Feb-04
Richhill	2927	Feb-04
Limavady	13,869	Sep-03
Strabane	15,463	Sep-03
Londonderry	75529	Nov-06
Carrickfergus	28,170	Aug-03
Randalstown*	5734	Mar-08
Antrim*	31983	Mar-08
Ballycastle	10,592	Jun-05
Portadown*	30,154	Nov-06
Craigavon*	16,281	Nov-06
Armagh	17,568	Apr-09
Warrenpoint*	6000	Apr-09
Bangor*	59813	Oct-10

 CATEGORY A
POPULATION

770892

CATEGORY
B.CATCHMENTS SUBJECT TO COMPLETED SCOPING
STUDIES

Annahilt	1550
Saintfield	3822
Crossgar*	1892
Ballykelly	2091
Dungiven	3624
Eglinton (Donnybrewer)	4130
Greysteel	1977
Ballygowan	3029

Killyleagh*	3276
Fintona	1856
Fivemiletown	1118
Irvinestown	2240
Lisnaskea	4029

CATEGORY B POPULATION	34634
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CATEGORY C.	'DAS STAGE 1' COMPLETE Initial DAS	
	Coalisland	6576
	Gilford	2028
	Markethill	1875
	Castlederg	3561
	Newbuildings*	4500
	Newtownstewart	1748
	Sion Mills	3118
	Castlerock	1883
	Bellaghy	1261
	Garvagh	1631
	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	
	Newtownbreda	31,785

CATEGORY

E.	DASs WHICH WERE 'IMPLEMENTED'	
	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	
	Crumlin*	4260
	Holywood*	12000
	Whitehouse	66,885
	Belfast*	239,457
	Greenisland	8275

Domestic population extracted from Asset Performance "Master List of AIR 11" spreadsheet, 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).

Start dates of DASs have not been provided as they are mostly not readily available.

Line 23 - Delivery of improvements to nominated UIDs as part of a defined programme of work

This line was not reported in AIR 10.

Five UID improvements have been included within the twenty total, which were not within the original Final Determination list. These are included on the assumption that they will become approved amendments to the Final Determination list by means of the PC10 Change Control Protocol.

General Commentary from Asset Management - Strategic Investment

Lines 24 & 25

Line 24 – Delivery of improvements to WwTW through nominated schemes as part of a defined programme of work

NIW delivered 20 improvements to WwTW listed within the FD Annex N1 02.00 within the period, which is in line with the delivery required in this area within PC10.

Programme 15 Carryover WwTW – projects delivered

KB269	Toome (Creagh) Sewerage Scheme
KB278	Moneymore STW Imps
KB279	Stewartstown WwTW Improvements
KB281	Maghera WwTW
KB282	Magherafelt WwTW
KB284	Coagh WwTW Improvements
KB333	Cargan WwTW
KC284	Cloughmills WwTW
KC299	Bushmills + Portballintrae WwTW
KF005	Coalisland WwTW
KL393	Ballymonie WwTW
KN533	Rousky Sewerage Scheme
KR310	Newtownbreda WwTW
KS224	Downpatrick WwTW
KS307	Lougheries WwTW
KS374	Darragh's Cross WwTW
KT125	Hook's Corner WwTW
KT377	New Holland WwTW
KV064	Lurganare WwTW

There was substantial change to the carryover WwTW programme during the development and agreement of PC10, due to a range of lands, planning and project slippage issues. A further 11 WwTW projects were added to the programme (those projects with a spend in the PC10 period over 50k as agreed with NIAUR), in many cases this represented the costs of completing a project that had reached beneficial use in the previous reporting period, for example KS212 Portaferry WwTW.

One carryover project, KS225 Ardglass WwTW has yet to start as lands issues have yet to be resolved. KS263 Saintfield WwTW has had a scope change and KR389 Ballyhalbert has had a major scope change to ensure compliance with NIEA requirements.

After Reporter review and challenge reconciliation with previously reported completion of WwTW outputs in Table 36 of AIR10 and AIR 11 was carried out and a review of completion dates on site compared with the CIM dates held within the forms on CAPTRAX.

This resulted in a number of changes, based on improved information, KF012 Moygashel (Dungannon) had been claimed as complete in AIR10 –so was removed to eliminate double counting. Projects KR310 Newtownbreda WwTW and KS224 Downpatrick WwTW have been added to the beneficial use list though not reported in the Q4 CIM dates as complete.

KS374 Darragh's Cross WwTW was added to the list as this works has been completed but was not claimed within AIR10. This project will be added to programme 15 as part of the ongoing change process.

These changes have been reflected in the totals claimed within the AIR11 tables.

The majority of carryover projects will be completed prior to the major reduction in CAPEX funding projected in 12/13.

Programme 16 New Starts WwTW – project delivered

KF320	Bush WwTWs
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The new starts WwTW programme progressed, with KF320 Bush WwTW delivered early and KV045 Mullaghbane WwTW, KV125 Forkhill WwTW, KB314 Gulladuff WwTW and the nutrient removal projects KL465 Limavady, KN622 Omagh, KC416 Glenstall progressing as planned. KL350 Benone WwTW and KS848 Newcastle WwTW should start within the PC10 period but will complete outside the PC10 period, due to lands, procurement and the need to reduce spending in 12/13 and 13/14.

The other new start projects will be affected by the PE funding restrictions, with KT114 Hillsborough WwTW upgrades and KC302 Ballintoy WwTW now scheduled to deliver just outside the PC10 period. The majority of the work to be carried out at New Holland WwTW and Maghera WwTW will be completed within the PC10 period despite PE funding restrictions. If further PE reductions are experienced KB314 Gulladuff WwTW may be postponed.

Programme 21 Additional Outputs

This project commenced early and a number of WwTW projects started on site during this period, including KF028 Keady WwTW.

Confidence grades.

The confidence grades for this line was determined using the reporting guidance and was assessed as B3 – based on the evidence within the methodology. This confidence grade should remain for the revised claim of 20 WwTW projects.

NIW has identified a number of issues with the Beneficial Use dates reported within the CIM from CPMR and commented on these in the methodology. NIW will seek to improve the beneficial use dates within the CIM through data improvement and cleansing processes within CPMR, removing older data sources and increasing the accuracy of project date estimates.

This line was not completed in the AIR10 submission and thus has no outstanding Reporter recommendations.

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 two projects which invested during 10/11, KX220 which spent £3k and the main project KI463 which spent £8863k and completed upgrades at 15 WwTW (i.e. £8866K).

This covers 12 upgrades delivered to works under 250PE, Seacon, Brantry, Drumaferry, Drumhillery, Feumore, Lisnalea, Madden, Arvalee, Ballyquin, Donagheady, Killaloo and Tattysallagh.

In addition the reported expenditure includes 3 projects completed over 250PE as part of the programme Galbally, Maghery and Annahugh wastewater treatment works. These sites ranged between 280PE and 530PE and delivered a modular RBC solution for these works. These were included in the programme in autumn 2010 to address a range of maintenance and quality issues at these sites.

This level of delivery indicates that NIW is on target to deliver the number of small WwTW upgrades specified within the Final Determination, subject to funding availability in 12/13. A further 5 sites substantially complete during this year will be reported in 11/12, including Silverbridge, Montieth and Letterbin under 250PE and Orritor and Garvaghy over 250PE.

NIW increased the investment in this area during the year from the original estimate of around £6m nominal including base maintenance to a total of £8.8m nominal.

COPI was applied to the figures as required by NIAUR in the reporting requirements for AIR 11, reducing the totals to £8.1m 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. 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 EW on this project with the potential for a change of up to 3% on the total spend.

This line was not completed in the AIR10 submission and thus has no outstanding Reporter recommendations.

PPP Section – Intermittent Discharges

It should be noted that neither the AIR11 Table 16 nor the Chapter 16 NIAUR Guidance had made reference to the reporting of PPP intermittent discharges. To ensure comprehensive reporting, and to reflect changes in NIW's Intermittent Discharges since AIR09 (due to works transferring to PPP etc), the full list of PPP outfalls and overflows are listed below.

NDA WwTW

1. Briggs Rock new outfall to Irish Sea

NDA WwTW Treated Effluent

2. Briggs Rock old outfall (1) to Irish Sea

Briggs Rock screened settled storm discharge
Briggs Rock emergency screened settled wastewater
Briggs Rock screened storm formula A overflow

3. Briggs Rock old outfall (2) to Irish Sea

Briggs Rock screened wastewater emergency
Orlock PS screened wastewater emergency

4. Millisle outfall to Irish Sea

Millisle screened settled storm discharge
Millisle screened settled wastewater emergency

5. Donaghadee outfall to Irish Sea

Donaghadee screened settled storm discharge
Donaghadee screened settled wastewater emergency

Ballynacor WwTW

6. Lough Neagh outfall

BNC WwTW treated effluent
BNC settled storm discharge
BNC SDP treated effluent

7. Closset River

BNC settled storm discharge

Ballyrickard WwTW

8. Newton Burn (1)

BRK WwTW treated effluent

9. Newton Burn (2)

BRK WwTW settled storm discharge.

Armagh WwTW

10. Callan River

ARM WwTW final effluent
ARM settled storm discharge
ARM settled wastewater emergency

Richill WwTW

11. River Tall (1)

RHL WwTW treated effluent

12. River Tall (2)

RHL settled storm discharge

13. River Tall (3)

RHL settled wastewater emergency

Bullays Hill WwTW

14. Woodville River

BHL screened settled storm discharge
BHL settled wastewater

Seagoe WwTW

15. River Bann (1)

SEA screened settled storm discharge
SEA screened settled wastewater emergency

16. River Bann (2)

SEA screened storm discharge
SEA screened wastewater emergency.

Kinnegar WwTW

17. Belfast Lough

KIN treated effluent
KIN above 6DWF screened storm discharge
KIN screened and settled storm discharge
KIN screened and settled wastewater emergency.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 16A NON FINANCIAL MEASURES
SEWERAGE SERVICE SERVICEABILITY INDICATORS (TOTAL)**

DESCRIPTION	UNITS	DP	1	
			2010-2011	CG

A	SEWERS - MAINTENANCE				
1	Total number of rising main failures	nr	0	37	B2
2	Total number of gravity sewer collapses	nr	0	1,229	B2
3	Total number of sewer blockages	nr	0	26,230	B2
4	Total number of equipment failures repaired	nr	0	11,492	B2

Table 16a – Non Financial Measures – Sewerage Service Serviceability Indicators**Lines 1 to 3****Calculation Process**

Data gathering and calculation is as described below in the Line- Specific Methodology Statements for Table 16a: Lines 1 to 3.

The data required for table 16a –

Line 1 - Number of Rising Main Failures
Line 2 - Number of Gravity Sewer Collapses
and
Line 3 - Number of Sewer Blockages

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 AIR11 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 and 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 should be in a better position for AIR12 to report on whether collapses or 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 AIR11 is B2. NIW expects to consolidate this CG as we move forward into AIR12, 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.

- (a) 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
- (b) 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.

Suggested Improvements/Actions

NIW needs to collate separately data relating to other attendances at site to ensure that all equipment failures are recorded. Whilst it has been noted that the emphasis is clearly upon establishing those instances where a pumping station has been unable to deliver suitable forward flow there are current limitations relating to the specific design parameters for installations which prevent the correct interpretation at present. These specifically relate to information surrounding the design flows and pumping regimes at individual sites. Consequently it is recommended that detailed analysis of each pumping station is performed to enable only those instances where the design flow is not delivered to be recorded. This will involve establishment of the pumping control methodology i.e. duty/standby or duty/assist.

An alternative may be to utilise the telemetry data relating to high level alarms since this will indicate situations where the inlet flow has exceeded the discharge rate. However this method does not take account of excessive rainfall which has resulted in the design throughput of the station being exceeded and for which a consented emergency discharge is available.

NIW should alternatively develop a reporting database which requires each high level exceedance recorded via telemetry to be associated with a specific cause and incident as per the equipment failure categories identified in Chapter 16a definitions manual.

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 16B NON FINANCIAL MEASURES
SEWERAGE SERVICE SERVICEABILITY INDICATORS (NIW Only)**

DESCRIPTION				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						EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5			
1	Equivalent population band 3 to 6			179		92.5	87.2	88.1		A2	
2	Excluded STWs			72	nr						
3	Total STWs			251	nr						
DESCRIPTION				1		2		3		4	
				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			
B SEWAGE TREATMENT WORKS - SS PERFORMANCE						EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5			
4	Equivalent population band 3 to 6			179		93.6	90.2	92.1		A2	
5	Excluded STWs			72	nr						
6	Total STWs			251	nr						
DESCRIPTION				1		2		3		4	
				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			
C SEWAGE TREATMENT WORKS - NH3 PERFORMANCE						EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5			
7	Equivalent population band 3 to 6			96		91.7	86.1	92.7		A2	
8	Excluded STWs			33	nr						
9	Total STWs			129	nr						

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 16B NON FINANCIAL MEASURES
SEWERAGE SERVICE SERVICEABILITY INDICATORS (PPP Only)**

DESCRIPTION	UNITS	DP	1	2	3	4	CG		
			NUMBER OF STW's		PERCENTAGE OF STW's WHERE THERE ARE NO BOD EVENTS FORECAST FOR THE CURRENT YEAR				
			UNITS	DP	UNITS			DP	
			nr	0	%			1	
A SEWAGE TREATMENT WORKS - BOD PERFORMANCE				EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5			
1	Equivalent population band 3 to 6		5	94.3	94.3	88.7	A2		
2	Excluded STWs	nr	0						
3	Total STWs	nr	0						
			6						
B SEWAGE TREATMENT WORKS - SS PERFORMANCE				EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5			
4	Equivalent population band 3 to 6		5	94.3	94.3	94.3	A2		
5	Excluded STWs	nr	0						
6	Total STWs	nr	0						
			6						
C SEWAGE TREATMENT WORKS - NH3 PERFORMANCE				EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5			
7	Equivalent population band 3 to 6		1	71.7	71.7	100.0	A2		
8	Excluded STWs	nr	0						
9	Total STWs	nr	0						
			3						

NORTHERN IRELAND WATER LIMITED - ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 16B NON FINANCIAL MEASURES
SEWERAGE SERVICE SERVICEABILITY INDICATORS (Total)**

DESCRIPTION	UNITS	DP
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1		2		3		4	
NUMBER OF STW's		PERCENTAGE OF STW's WHERE THERE ARE NO BOD EVENTS FORECAST FOR THE CURRENT YEAR					
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
		184	92.5	87.4	A2
		73			
		257			

NUMBER OF STW's		PERCENTAGE OF STW's WHERE THERE ARE NO SS EVENTS FORECAST FOR THE CURRENT YEAR					
UNITS	DP	UNITS				DP	
nr		%				1	

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

		EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5	CG
		184	93.6	90.3	A2
		73			
		257			

NUMBER OF STW's		PERCENTAGE OF STW's WHERE THERE ARE NO NH3 EVENTS FORECAST FOR THE CURRENT YEAR					
UNITS	DP	UNITS				DP	
nr		%				1	

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

		EVENT (a) Max > 2	EVENT (b) 95%ile > 1	EVENT (c) Mean > 0.5	CG
		97	91.5	85.9	A2
		35			
		132			

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 AIR11 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, AIR10 and AIR11. 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 2010 the Population Equivalents (PEs) used for scheduling were the PEs agreed between NI Water's Asset Management section (AMS), Environmental Regulation section and the Northern Ireland Environment Agency (NIEA). These PEs were used for the scheduling of samples for 2010. In accordance with the AIR09's reporter recommendation however, the works for this AIR11 submission have been assessed using the information (PEs and PE Bands) supplied by NI Water's AMS for its AIR11 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 2011 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.

Table 16b Commentary – Individual Lines

Lines 1, 2, 3 – BOD Performance – Equivalent Population Bands 3 – 6

For the reporting period 179 NI Water Sites were identified, 5 PPP sites were identified with 73 sites being excluded from the assessment.

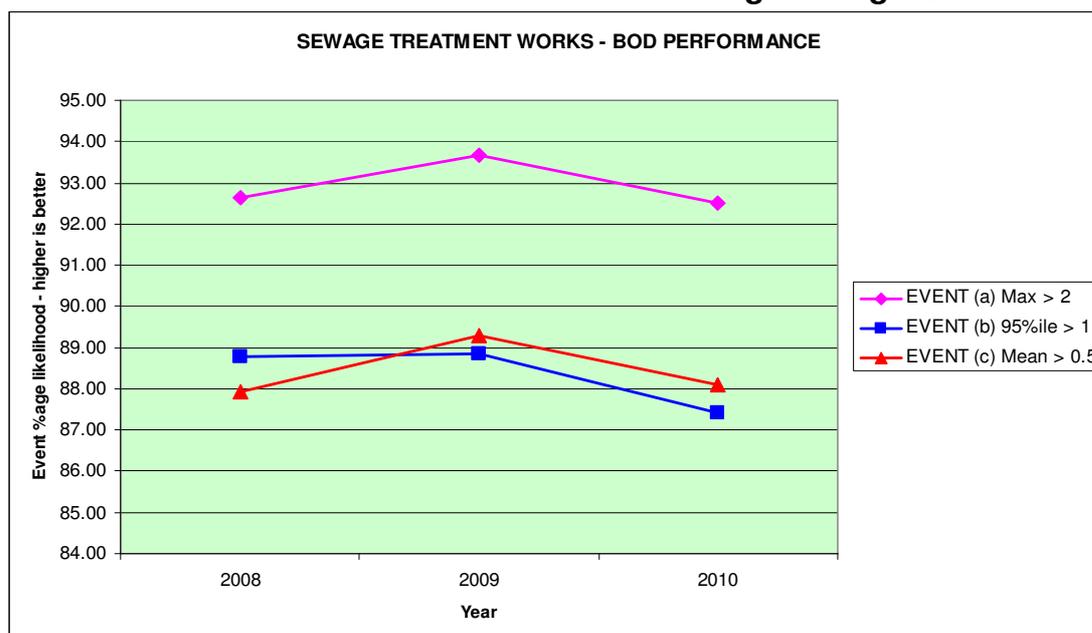
2010 NIW Sites Excluded from BOD Assessment

Site Code	Site Name	Reason for Exclusion
S13AJ	Clogh WWTW	Band 2
S13AU	Moorfields WWTW	Band 2
S13CN	Derrychrin WWTW	Band 2
S13CU	Dunamore WWTW	Band 2
S13DN	Orritor WWTW	Band 2
S13DQ	Rock WWTW	Band 1
S13FT	Desertmartin WWTW	Band 2
S13GD	Knockloughrim WWTW	Band 2
S13GO	Moneyneany WWTW	Band 2
S15AR	Parkgate WWTW	Out of service @ 31/03/11
S15AT	Roughfort WWTW	Band 2
S15AW	Toome WWTW	Out of service @ 31/03/11
S17BC	Liscolman WWTW	Band 2
S17CM	Clarehill WWTW	Band 2
S17EF	Ballyvoy WWTW	Band 2
S17ES	Mosside WWTW	Band 2
S23AG	Magheralin WWTW	Out of service @ 31/03/11
S23AK	Blackskull WWTW	Band 2
S23AN	Derrytrasna WWTW	Band 2
S23AR	Maghery WWTW	Band 2
S23AU	Robinstown Clonmakate WWTW	Band 2
S23AW	Upper Ballinderry WWTW	Band 2
S23BK	Derrymore WWTW	Band 2
S25AL	Annaghmore WWTW	Band 2
S25AR	Bush WWTW	Out of service @ 31/03/11
S25AY	Darkley WWTW	Band 2
S25BD	Galbally WWTW	Band 2
S25BI	Killyman WWTW	Out of service @ 31/03/11
S25BP	Redford WWTW	Band 2
S25CD	Brockagh Terrace (Mountjoy Dungannon)WWTW	Band 2
S27AR	Belleeks WWTW	Band 2
S27AW	Cullaville WWTW	Band 2

Site Code	Site Name	Reason for Exclusion
S27AY	Drumintee WWTW	Band 2
S27BE	Kilcoo WWTW	Band 2
S27BL	Lurganare WWTW	Band 2
S27BO	Moneyslane WWTW	Band 2
S35AL	Ballycranbeg WWTW	Band 2
S35AM	Loughries WWTW	Band 2
S36AI	Annacloy WWTW	Band 2
S36AM	Kilmore (Down)WWTW	Band 2
S36BG	Glassdrumman WWTW	Band 1
S36BH	Seaforde WWTW	Out of service @ 31/03/11
S36BI	Maghera (Down) WWTW	Band 2
S36BP	Darragh Cross WWTW	Out of service @ 31/03/11
S37AI	Gravel Hill (Hooks Corner) WWTW	Out of service @ 31/03/11
S37AN	Mullaghglass 1 WWTW	Band 1
S37AO	Drumlough WWTW	Band 1
S37AP	Edenderry WWTW	Band 2
S43BA	Ballymonie WWTW	Band 2
S43BF	Bonnaboigh WWTW	Band 2
S43BG	Benone WWTW	Band 1
S43CB	Carrowclare WWTW	Band 1
S43DA	Dernaflaw WWTW	Band 2
S43DK	Tamnaherin WWTW	Band 2
S43EJ	Gortnaghey WWTW	Band 2
S45AE	Ardstraw WWTW	Band 2
S45EF	Garvaghey WWTW	Band 1
S45FD	Greencastle WWTW	Band 2
S45FJ	Killen WWTW	Band 2
S45IC	Plumbridge WWTW	Band 2
S45IG	Seskinore WWTW	Band 2
S45KG	Bready WWTW	Band 2
S47BA	Ballycassidy WWTW	Band 2
S47BI	Castle Archdale WWTW	Band 1
S47CA	Clabby WWTW	Band 2
S47CJ	Donagh WWTW	Band 1
S47EA	Florencecourt WWTW	Band 2
S47FE	Kinawley WWTW	Band 2
S47FH	Lack WWTW	Band 1
S47GC	Lisnarrick WWTW	Band 2
S47GI	Monea WWTW	Band 2
S47HJ	Tamlaght WWTW	Band 2

2010 PPP Sites Excluded from BOD Assessment

Site Code	Site Name	Reason for Exclusion	2010 PE
S23BN	Ballynacor PPP WWTW	Insufficient samples	102837

BOD Performance - Year on Year – Higher %age is better**Lines 4, 5, 6 – SS Performance – Equivalent Population Bands 3 – 6**

For the reporting period 179 NI Water Sites were identified, 5 PPP sites were identified with 73 sites being excluded from the assessment.

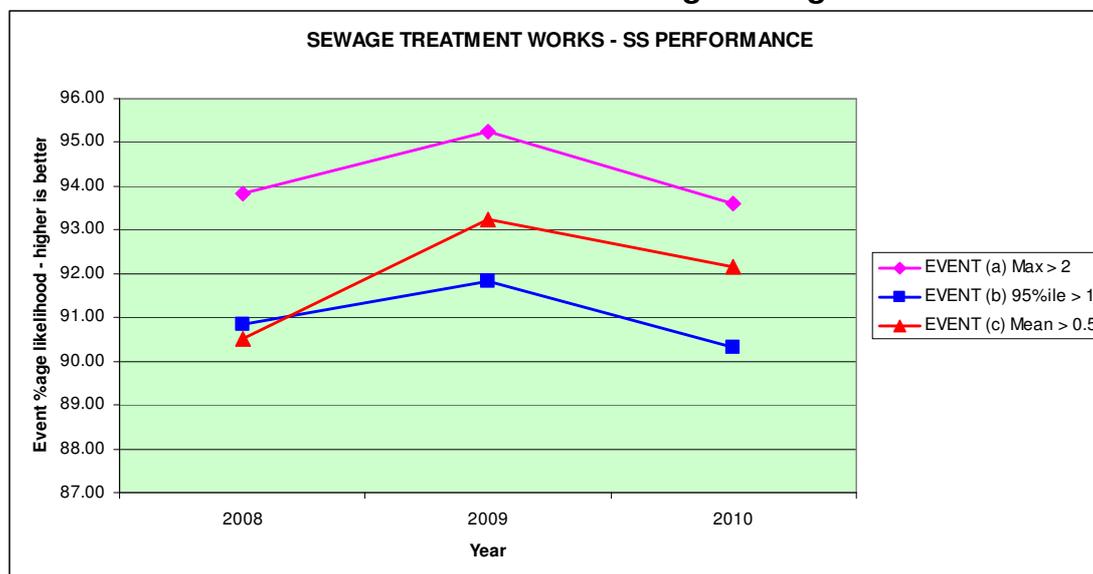
2010 NIW Sites Excluded from SS Assessment

Site Code	Site Name	Reason for Exclusion
S13AJ	Clogh WWTW	Band 2
S13AU	Moorfields WWTW	Band 2
S13CN	Derrychrin WWTW	Band 2
S13CU	Dunamore WWTW	Band 2
S13DN	Orritor WWTW	Band 2
S13DQ	Rock WWTW	Band 1
S13FT	Desertmartin WWTW	Band 2
S13GD	Knockloughrim WWTW	Band 2
S13GO	Moneyneany WWTW	Band 2
S15AR	Parkgate WWTW	Out of service @ 31/03/11
S15AT	Roughfort WWTW	Band 2
S15AW	Toome WWTW	Out of service @ 31/03/11
S17BC	Liscolman WWTW	Band 2
S17CM	Clarehill WWTW	Band 2
S17EF	Ballyvoy WWTW	Band 2
S17ES	Mosside WWTW	Band 2
S23AG	Magheralin WWTW	Out of service @ 31/03/11
S23AK	Blackskull WWTW	Band 2
S23AN	Derrytrasna WWTW	Band 2
S23AR	Maghery WWTW	Band 2
S23AU	Robinstown Clonmakate WWTW	Band 2
S23AW	Upper Ballinderry WWTW	Band 2
S23BK	Derrymore WWTW	Band 2

Site Code	Site Name	Reason for Exclusion
S25AL	Annaghmore WWTW	Band 2
S25AR	Bush WWTW	Out of service @ 31/03/11
S25AY	Darkley WWTW	Band 2
S25BD	Galbally WWTW	Band 2
S25BI	Killyman WWTW	Out of service @ 31/03/11
S25BP	Redford WWTW	Band 2
S25CD	Brockagh Terrace (Mountjoy Dungannon)WWTW	Band 2
S27AR	Belleeks WWTW	Band 2
S27AW	Cullaville WWTW	Band 2
S27AY	Drumintee WWTW	Band 2
S27BE	Kilcoo WWTW	Band 2
S27BL	Lurganare WWTW	Band 2
S27BO	Moneyslane WWTW	Band 2
S35AL	Ballycranbeg WWTW	Band 2
S35AM	Loughries WWTW	Band 2
S36AI	Annacloy WWTW	Band 2
S36AM	Kilmore (Down)WWTW	Band 2
S36BG	Glassdrumman WWTW	Band 1
S36BH	Seaforde WWTW	Out of service @ 31/03/11
S36BI	Maghera (Down) WWTW	Band 2
S36BP	Darragh Cross WWTW	Out of service @ 31/03/11
S37AI	Gravel Hill (Hooks Corner) WWTW	Out of service @ 31/03/11
S37AN	Mullaghglass 1 WWTW	Band 1
S37AO	Drumlough WWTW	Band 1
S37AP	Edenderry WWTW	Band 2
S43BA	Ballymonie WWTW	Band 2
S43BF	Bonnaboigh WWTW	Band 2
S43BG	Benone WWTW	Band 1
S43CB	Carrowclare WWTW	Band 1
S43DA	Dernaflaw WWTW	Band 2
S43DK	Tamnaherin WWTW	Band 2
S43EJ	Gortnaghey WWTW	Band 2
S45AE	Ardstraw WWTW	Band 2
S45EF	Garvaghey WWTW	Band 1
S45FD	Greencastle WWTW	Band 2
S45FJ	Killen WWTW	Band 2
S45IC	Plumbridge WWTW	Band 2
S45IG	Seskinore WWTW	Band 2
S45KG	Bready WWTW	Band 2
S47BA	Ballycassidy WWTW	Band 2
S47BI	Castle Archdale WWTW	Band 1
S47CA	Clabby WWTW	Band 2
S47CJ	Donagh WWTW	Band 1
S47EA	Florencecourt WWTW	Band 2
S47FE	Kinawley WWTW	Band 2
S47FH	Lack WWTW	Band 1
S47GC	Lisnarrick WWTW	Band 2
S47GI	Monea WWTW	Band 2
S47HJ	Tamlaght WWTW	Band 2

2010 PPP Sites Excluded from SS Assessment

Site Code	Site Name	Reason for Exclusion	2010 PE
S23BN	Ballynacor PPP WWTW	Insufficient samples	102837

SS Performance - Year on Year – Higher %age is better**Lines 7, 8, 9 – Ammonia Performance – Equivalent Population Bands 3 – 6**

For the reporting period 96 NI Water Sites were identified, 1 PPP sites was identified with 35 sites being excluded.

2010 NIW Sites Excluded from Ammonia Assessment

Site Code	Site Name	Reason for Exclusion
S13CN	Derrychrin WWTW	Band 2
S13DN	Orritor WWTW	Band 2
S13DQ	Rock WWTW	Band 1
S13GO	Moneyneany WWTW	Band 2
S15AT	Roughfort WWTW	Band 2
S17BC	Liscolman WWTW	Band 2
S17CM	Clarehill WWTW	Band 2
S23AG	Magheralin WWTW	Out of service @ 31/03/11
S23AN	Derrytrasna WWTW	Band 2
S23AU	Robinstown Clonmakate WWTW	Band 2
S25AR	Bush WWTW	#N/A
S25AY	Darkley WWTW	Band 2
S25BD	Galbally WWTW	Band 2
S25BI	Killyman WWTW	Out of service @ 31/03/11
S27AR	Belleeks WWTW	Band 2
S27AY	Drumintee WWTW	Band 2
S27BE	Kilcoo WWTW	Band 2
S27BL	Lurganare WWTW	Band 2
S35AL	Ballycranbeg WWTW	Band 2
S36AI	Annacloy WWTW	Band 2

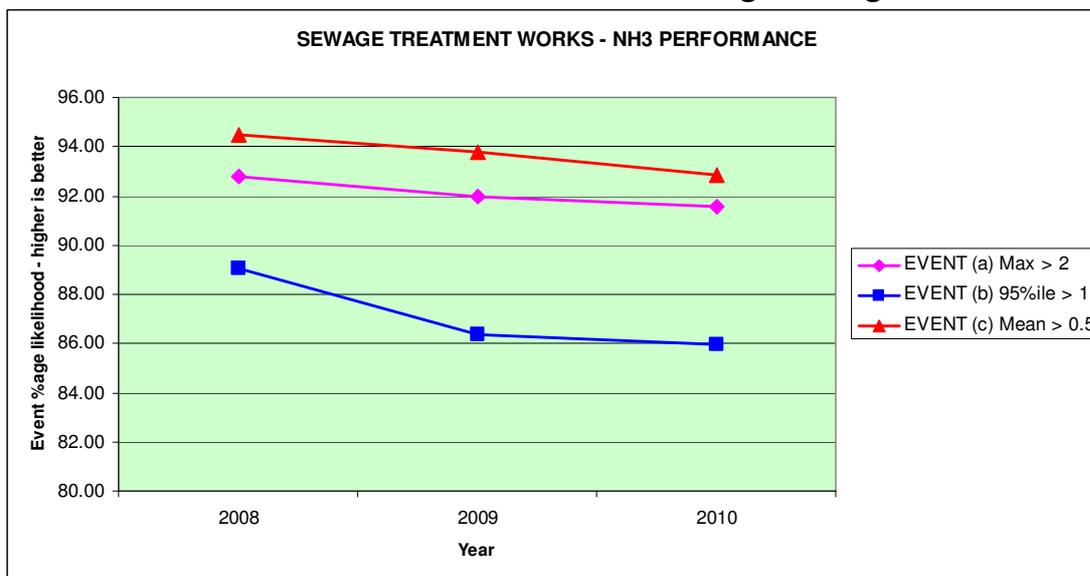
Site Code	Site Name	Reason for Exclusion
S36AM	Kilmore (Down)WWTW	Band 2
S36BI	Maghera (Down) WWTW	Band 2
S37AI	Gravel Hill (Hooks Corner) WWTW	Out of service @ 31/03/11
S37AN	Mullaghglass 1 WWTW	Band 1
S43DK	Tamnaherin WWTW	Band 2
S43EJ	Gortnaghey WWTW	Band 2
S45FD	Greencastle WWTW	Band 2
S45FJ	Killen WWTW	Band 2
S47CA	Clabby WWTW	Band 2
S47FE	Kinawley WWTW	Band 2
S47FH	Lack WWTW	Band 1
S47GI	Monea WWTW	Band 2
S47HJ	Tamlaght WWTW	Band 2

2010 PPP Sites Excluded from Ammonia Assessment

Site Code	Site Name	Reason for Exclusion	2010 PE
S23BN	Ballynacor PPP WWTW	Insufficient samples	102837
S25EB	Richill PPP WWTW	Insufficient samples	3384

Table 16b Commentary – Year on Year

NH3 Performance - Year on Year – Higher %age is better



2010 AMS Sites which do not exist on NIW's LIMS and not reported on

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S00003	Forked Bridge WTW (Septic Tank)	Band 1	3
S00006	Ballysallagh 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
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	Drumhirik	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
S00282	Glassdrummond	Band 1	21
S00283	Carricknaveagh (WWTW)	Band 1	17

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S00284	Thorney Glen	Band 1	50
S00287	Lisowan	Band 1	51
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
S00327	Ballynadolly	Band 1	138
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
S00806	Dunmore Cottages	Band 1	51
S00829	Gransha Road(26-28)	Band 1	3
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
S00856	Belfast Road(207-209)	Band 1	6
S00857	Middle Braniel Road(80-90)	Band 1	18
S00902	Rathlin (Retention Tank)	Band 1	150
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

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
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
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	55
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
S01186	Giants Causeway (Retention Tank)	Band 1	46
S01187	Glasmullen (WWTW)	Band 1	9
S01188	Glenmakeeran	Band 1	6
S01189	Greenans	Band 1	9

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
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
S01210	Glarryford (WTW) Septic Tank	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
S01440	Duneany (WWTW)	Band 1	72
S01443	Grove Park	Band 1	27
S01444	Killygore	Band 1	50
S01448	Old Green	Band 1	17
S01450	Procklis	Band 1	73
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
S01559	Carnan	Band 1	71
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

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S01578	Keenaghan (1)	Band 1	12
S01579	Keenaghan (2)	Band 1	12
S01580	Kildress Terrace	Band 1	18
S01583	Killymuck	Band 1	244
S01584	Kinturk	Band 1	18
S01585	Knockanroe	Band 1	12
S01587	Lisnahall	Band 1	47
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
S01711	Oakland Villas	Band 1	18
S01713	Springhill Road(1)	Band 1	14
S01715	Garryduff Road(112- 122)	Band 1	18
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
S01735	Gracehill Road(28)	Band 1	6
S01736	Causeway Road(30)	Band 1	6
S01737	Glenbush Road(31)	Band 1	6

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
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
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

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
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
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

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S02120	Ballyward	Band 1	6
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
S02139	Knock Terrace	Band 1	36
S02140	Laurelvale Road	Band 1	12
S02147	Maglion Terrace	Band 1	36
S02148	Manse Road (Down)	Band 1	12
S02149	Marlaco Road	Band 1	28
S02150	McCandless Terrace	Band 1	36
S02153	Mossvale Terrace	Band 1	36
S02154	Mount Ida	Band 1	6
S02157	Rathfriland Road	Band 1	12
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
S02257	Carrickrovaddy	Band 1	23
S02258	Ballsmill	Band 1	12
S02259	Glenanne	Band 1	9
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	39
S02268	Drumilly	Band 1	60
S02274	Lisnalea	Band 1	75

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S02276	McKinley Park	Band 1	45
S02278	Mountain View (Drumintee)	Band 1	70
S02283	Orahilly Park	Band 1	37
S02284	Oliver Plunkett Park	Band 1	84
S02286	St Bridgids Villas	Band 1	27
S02287	Goragh Road	Band 1	6
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
S02403	Diviny	Band 1	19
S02404	Drumard Primate (WWTW)	Band 1	37
S02406	Feumore (WWTW)	Band 1	74
S02408	Jennys Lane	Band 1	17
S02409	Knocknagore (WWTW)	Band 1	15
S02418	Mullahead Road (WWTW)	Band 1	9
S02421	Tartaraghan	Band 1	50
S02427	Cross Lane(9-22)	Band 1	24
S02428	Clarehill Road	Band 1	12
S02430	Legatirriff	Band 1	23
S02431	Soldierstown	Band 1	32
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
S02579	Farmacaffley	Band 1	62
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

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S02589	Magheraville	Band 1	12
S02590	Manor House	Band 1	12
S02598	Teeraw	Band 1	12
S02599	Tullyelmer (WWTW)	Band 1	6
S02600	Tullyroan	Band 1	36
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
S02689	Ballycoshone	Band 1	6
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
S02715	Saval More Cottages	Band 1	19
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
S02722	St Annes Terrace	Band 1	18
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
S02841	Drumkee	Band 1	17
S02842	Dyan	Band 1	63
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

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S02887	Glascar Road(28-30)	Band 1	6
S02889	Gortnagola Road	Band 1	6
S02890	Ballygowan Road (140-142)Banbridge	Band 1	6
S02892	Castlewellan Road (Dromore)	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
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
S03065	Cranagh (WWTW)	Band 1	63
S03066	Creaghcor	Band 1	30
S03067	Crebarkey	Band 1	24
S03068	Creevangar	Band 1	12
S03069	Crew Bridge	Band 1	18
S03070	Cullion (Bready)	Band 1	83
S03073	Derryaghna	Band 1	18
S03085	Dromore Highlands	Band 1	126
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
S03099	Drumraighland	Band 1	95
S03102	Dunmullan	Band 1	58
S03104	Edenderry (Tyrone)	Band 1	58

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
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	81
S03119	Glenabbey (WWTW)	Band 1	45
S03120	Glenagoorland	Band 1	18
S03127	Gortscreagan	Band 1	82
S03128	Gosheden (1)	Band 1	30
S03129	Gosheden (2)	Band 1	67
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
S03141	Kilgarrett	Band 1	12
S03142	Killaloo	Band 1	92
S03148	Kilskeery	Band 1	91
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
S03160	Letterbreen	Band 1	88
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
S03180	Conthem Rd	Band 1	29
S03183	Milltown(Artigarvan)	Band 1	12
S03184	Milltown (Burndennet)	Band 1	45
S03185	Molenan	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

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
S03222	Springfield	Band 1	83
S03227	Tattysallagh	Band 1	70
S03230	Tirquin	Band 1	24
S03232	Tully (WWTW)	Band 1	46
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	Abbacoy Road	Band 1	42
S03987	Drumlegagh Church Road	Band 1	92
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
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
S04106	Jacksons Crescent (1-6)	Band 1	18
S04107	Jacksons Crescent (7-8)	Band 1	6
S04108	Jacksons Crescent (9-10)	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

CAR ID	WWTWs Name	AIR11 Band	AIR11 Reported PE
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	Drumsurn Road (234-238)	Band 1	9
S04121	Bovevagh Road (37-41)	Band 1	6
S04122	Whin Road (21-23)	Band 1	6
S04123	Ballyavelin Road (133-135)	Band 1	12
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
S04158	Drumalig Road(9-11)	Band 1	6
S04159	Windmill Road(71-73)	Band 1	6
S04161	Drumalig Road (62-64)	Band 1	6
S04162	Carnteel Road (122-124)	Band 1	6
S04873	Grove Road(21-23)	Band 1	6
S04875	Ballybogie Road(7-9)	Band 1	6
S04877	Ballinderry Road (45-49) Antrim	Band 1	9
S05182	Beech Hill South	Band 1	54
S05188	Lower Rashee Road (15-21)	Band 1	12
S05280	Tullynakill Road	Band 1	31
S05286	Reaskmore Road	Band 1	12

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	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	Total	
			CG									
A SEWERAGE SUB AREAS GENERAL												
Area name:-												
1	Annual average resident connected population	000	1								1,439.5	C3
2	Annual average non-resident population	000	1								20.0	C3
3	Volume of sewage collected (daily average)	MI/d	1								328.2	C3
4	Total connected properties	nr	0								659,264	C3
5	Area of Sewerage District	km ²	0								13,520	B2
B SEWERAGE DATA												
6	Total length of sewer	km	0								14,905	B3
C Costs												
7	Sewerage: Direct Costs	£000	0								15,809	
8	Sewerage: Power Costs	£000	0								4,817	
9	Sewerage: Service Charges	£000	0								0	
10	Sewerage: General & Support Expenditure	£000	0								8,629	
11	Sewerage: Functional Expenditure	£000	0								24,438	

**Table 17a Sewerage Explanatory Factors- Sewerage Sub-Area
Explanatory Factors**

Line 1 - Annual average resident connected population (Total)

AIR10	Confidence Grade	AIR11	Confidence Grade
1,434.3 x 10 ³	C4	1,439.5 x 10 ³	C3

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 2, 'total' column) plus annual average non-resident population in table 17a (line 3, '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 AIR11: Table 13: Line 10, the total connected population (comprising resident and non-resident population) was 1,459.467 x 10³.
- According to AIR11: Table 17a: Line 2, the annual average non-resident population was 19.992 x 10³.
- By calculation, the annual average resident connected population = 1,459.467 x 10³ - 19.992 x 10³ = **1,439.475 x 10³**.

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

The AIR11 figure of 1,439.5 x 10³ is 5.2 x 10³ higher than the AIR10 figure of 1,434.3 x 10³. This represents an increase of 0.4% and is attributed to an increase in annual average non-resident connected sewerage population of 0.7 x 10³ and an increase in total connected sewerage population of 5.9 x 10³.

Confidence Grade

There are two figures associated with the calculation of AIR11: Table 17a: Line 1: Column 9. The first figure is derived from AIR11: Table 13: Line 10 and was allocated a confidence grade of B3. The second figure is derived from AIR11: 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)

AIR10	Confidence Grade	AIR11	Confidence Grade
19.3 x 10 ³	C3	20.0 x 10 ³	C3

NI Water has included holiday and tourist population connected to the sewerage system, averaged over the year.

NI Water has not included any allowance for daily commuters or day visitors.

Statement detailing estimation method used including date of data on which estimate is made

NI Water obtained a copy of the “GB and Overseas Tourism Performance (January – September 2010)” from the Research section of the NI Tourist Board website¹.

The report was based on data from NITB’s Passenger Survey and Fáilte Ireland’s Survey of Overseas Travellers.

- According to the publication, the number of non-resident visitor nights for Northern Ireland (Jan-Sep 10) was 5,704,000.

NI Water obtained copies of Monthly Hotel Occupancy Reports and Monthly Guesthouse and Bed and Breakfast Occupancy Reports from the Research section of the NI Tourist Board website¹.

- According to the occupancy reports, 1,982,000 hotel bed-spaces and 447,600 guesthouse/B&B bed-spaces were sold (Jan-Sep 10) totalling 2,429,600.
- The number of bed-spaces sold from Jan-Sep 10 (2,429,600) as a percentage of the total number of bed-spaces sold in 2010 (3,108,100) was 78.15%.
- The number of non-resident visitor nights for Northern Ireland (Jan-Dec 10) was estimated as follows:

$$(5,704,000 / 78.15) \times 100 = 7,296,922$$

- The annual average non-resident population was estimated as follows:

$$7,296,922 / 365 \text{ nights} = \mathbf{19,992}.$$

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”.

¹ www.nitb.com

Changes in Methodology

Up to and including AIR09, this calculation was based on an estimated annual number of non-resident visitor nights for Northern Ireland, published in NI Tourist Board's "Preliminary Visitor Tourism Forecast". According to the publication, the estimate was based on January to August data from both the Northern Ireland Passenger Survey (NITB) and the Survey of Overseas Travellers (Fáilte Ireland). In 2009, NI Tourist Board published the actual number of non-resident visitor nights (Jan-Aug 09) in their "GB and Overseas Visitors to Northern Ireland Summary".

In 2010, NI Tourist Board has published the actual number of non-resident visitor nights (Jan-Sep 10) in their "GB and Overseas Tourism Performance". The annual number was estimated by NI Water on the basis that the percentage bed-spaces sold for hotel, guesthouse and bed and breakfast establishments (Jan-Sep 10) was 78.15%.

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 AIR: Table 17a: Line 2: Column 9 is the number of visitor nights, any change in reported figures can be directly attributed to fluctuations in tourism levels.

A comparison of the estimated numbers of visitor nights in 2009 (7,036,824) and 2010 (7,296,922) reveals there has been a slight increase in tourism. The "GB and Overseas Tourism Performance (January – September 2010)" states that there was a 6% growth in European visitors year to date (January-September 2010).

Confidence Grade

The annual average non-resident population is an estimate based on several sources of information.

1. The "GB and Overseas Tourism Performance (January – September 2010)" provides the actual number of non-resident visitor nights for Northern Ireland but only for the first 9 months of 2010. The number is based on surveys conducted by both NITB and Fáilte Ireland. An annual equivalent is only obtainable through extrapolation.
2. The Hotel and Guesthouse/B&B Occupancy Reports provide the numbers of bed-spaces sold. However, the numbers are 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.

Line 4 - Total Connected Properties

Northern Ireland Water's (NIW) property data is provided from the RapidXtra Property Summary Report, provided by Echo and validated through the Contract Office.

The confidence grade has remained at C3 and ensures consistency with Table 13 (as per previous Reporters recommendation).

We would expect this confidence grade to improve as the benefits of the data quality programme are realised during 2011/12.

Line 5 - Area of Sewerage District

The figure provided equates to the total land mass of Northern Ireland excluding major bodies of inland water. The same LPS product has been used to determine the Area of Sewerage District. There remains only one sewerage district for all of Northern Ireland. The confidence grade of the data will remain the same as the previous year.

Line 6 - Total length of sewer

There has been no change to the structure of the data reported on this year from the previous years that would directly affect the totals provided. The same queries have been used to extract the data from the Corporate Asset Register and have been checked to ensure that they are still relevant. The confidence grade of the data will remain the same as the previous year. There have been no significant improvements in data quality since the AIR10 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.

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 2011. Work is on going for AIR12, 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 AIR12. The figures to population 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 for AIR12. 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 reduced by circa £1.3M from AIR10. Power costs have fallen by circa £0.8M primarily due to the new power contract negotiated in 2010/11 which resulted in a price decrease. Hired & Contracted costs have fallen by £0.2M primarily due to the movement of the premises budget for Westland from Operations to the EP Directorate. £0.3M of the reduction relates to Employment Costs and Other Direct Costs. The phased introduction of the cost to serve project during the year has reduced the costs coded to 611X – Cost Allocations which is included in Employment Costs. See Table 22 commentary for further explanation.

Line 8 - Power Costs

The figure for Power costs agrees to Table 22, Line 2 Column 1. See Table 22 commentary. Power costs have decreased by circa £0.8M primarily due to

the new power contract negotiated in 2010/11 which resulted in a price decrease.

Line 9 - Services Charges

There are no services charges

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 £0.9M lower than AIR10 due to the decrease in the direct costs. The percentage allocation used to apportion general & support has also reduced marginally. 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 decreased by circa £2.2M from AIR10.

Table 17b - Sewerage Explanatory Factors – Sewerage Treatment Works – Large Works Information Database

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 AIR11 are:

AIR11 Table 17b Band 6 Sites for Submission

LIMS Code	LIMS Name	Confirmed PE from AMS	AIR11 Band
S13BE	Ballymena (Tullagharley) WWTW	84584	Band 6
S15AO	Antrim (Milltown) WWTW	65278	Band 6
S15BS	Larne WWTW	27767	Band 6
S17HF	North Coast (Craigtownmore) WWTW	65058	Band 6
S25AC	Dungannon (Moygashel) WWTW	57770	Band 6
S27AC	Newry WWTW	59816	Band 6
S34AD	Newtownbreda WWTW	39889	Band 6
S34AE	Whitehouse WWTW	87877	Band 6
S34AG	Carrickfergus WWTW	31969	Band 6
S34AK	Belfast WWTW	357140	Band 6
S37AA	Lisburn WWTW	65667	Band 6
S37AB	Dunmurry WWTW	45693	Band 6
S43CI	Culmore WWTW	131967	Band 6
S45IB	Omagh/Mountjoy WWTW	40425	Band 6

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 95thile limits.

The PE information and confidence grading was provided by Asset Performance Team, as part of their AIR11 return as at 31st March 2011.

The classification of treatment works was provided by Asset Performance Team.

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:

AIR11 Table 17b Band 5 Sites for Reference

LIMS Code	LIMS Name	Confirmed PE from AMS	AIR11 Band
S13CH	Cookstown WWTW	19457	Band 5
S13GK	Magherafelt WWTW	14525	Band 5
S15AA	Ballyclare WWTW	18521	Band 5
S17BP	Glenstall WWTW	20513	Band 5
S17ED	Ballycastle WWTW	12117	Band 5
S27AA	Banbridge WWTW	23199	Band 5
S27AD	Warrenpoint WWTW	14922	Band 5
S36AA	Downpatrick Aeration WWTW	17144	Band 5
S36BB	Kilkeel WWTW	10344	Band 5
S36BO	Newcastle WWTW	12195	Band 5
S43GI	Limavady WWTW	16045	Band 5
S45JA	Strabane WWTW	23004	Band 5
S47HK	Enniskillen New WWTW	24126	Band 5

Lines 9 - 15 - Costs

This table was populated in the same way as AIR10. 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 2010 as at 6th May 2011. The Population Equivalent (PE) information used to complete this table was received by management accounts on 19th May 2011. All PPP sites have been removed from the table in AIR11 as they have all been in operated by PPP from 31st March 2010. In AIR10 part year costs for Ballinacor, Armagh and Bullays Hill were included.

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).

14 WWTW'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. In AIR10 there were 17 sites as part year costs were included for the 3 PPP Ballinacor, Armagh and Bullays Hill.

There remains one meter at each WWTW; so as in AIR10, 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 populate Line 9 and 10.

There is one electricity meter at Duncrue Street which includes the costs for the Belfast WWTWs (W10) and the Incinerators which are operated by PPP in 2010/11. The power team supplied an estimated 58:42 split between the Incinerators & the Belfast WWTWs which has been used to calculate the amount relating to sewage treatment at Belfast. The estimated split has

changed since AIR10 mainly due to the introduction of a second incinerator at the PPP site.

Direct costs have reduced by circa £1.5M from AIR10. Three PPP sites were included in AIR10 and are not included AIR11. The three sites accounted for £0.7M of the costs in AIR10, of which £0.6M related to power.

Power costs have decreased by £1.3M in this table across all sites, primarily due to the new power contract negotiated in 201011 which resulted in a price decrease.

The phased introduction of cost to serve has resulted in all direct labour costs and overheads been charged to sewage treatment. In AIR10 there was a portion allocated to Sludge Treatment which would not have been included in this table. With further implementation of the cost to serve project over 201112 this will improve in AIR12. Direct Labour postings are used to make apportionments of admin activities across all the sites, and this has resulted in an increased allocation to all columns.

Line 10 - Power Costs

Power costs show a decrease by circa £1.3M from AIR10 primarily due to the new power contract negotiated in 201011 which resulted in a price decrease. The power split at Duncrue between the Incinerator and the Belfast WWTW's also changed from AIR10. This along with the new power contract has reduced the power costs at Belfast WWTW's by circa £0.3M.

Line 11 - Service Charges

There are no 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 decreased by £0.8M from AIR10, primarily due to the reduction in the direct costs. The percentage allocation used to apportion general & support has also reduced. See Table 22 commentary for further explanation.

Line 13 - Functional Expenditure

This is a calculated line and is the total of Line 9 and Line 12. The total in the workings agrees to Table 22 (NIW Only) Column 2 Line 11. Costs have decreased by circa £2.3M since AIR10.

Line 14 - Terminal Pumping Costs

This information was populated in the same way as AIR10. Three of the works (Ballymena, Newry and Omagh) include the pumping station cost in the W location code and are included in Line 10. There is one electric meter at the works therefore these costs are not split out separately.

Line 15 - Sludge Costs

Sludge treatment is a separate activity in the accounts and the direct costs are not included in Line 9 to Line 13.

Table 17c – Sewerage Explanatory Factors – Sewage Treatment Works – Numbers**General**

The Asset Management Section (AMS) has co-ordinated information from PPP for the population of 'Table 17c – total' table, and the associated commentary.

Table 17c - 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 AIR10, PEs for 136 WWTWs have been updated.

Changes regarding WWTWs from the AIR10 period are as follows:

- a. 8 WWTWs have been rationalised and pumped away to larger WWTWs in last financial year.
- b. 5 WWTWs have been decommissioned.

This is a net decrease of 13 WWTWs from AIR10 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)

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. 1045 including the screened outfalls (4 No.) and the unscreened outfalls (13 No). The number of WWTWs in Table 15 line 8 is 1028 as the screened and unscreened outfalls are not to be included in the total for this line. Please note that the total number of WWTWs within NIW's Corporate Asset Register is 1046, as it this includes Ballyhalbert WWTWs twice as the works is located on two different sites although it is one single works.

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 AIR11 comparison between the two figures.

Total Residential Population used to Calculate Table 17C for AIR11	1205522
Total Population connected to the sewerage system based on Table 13 Line 10	1462873
Difference	257351

As can be seen there is a difference of 257351. However the Table 17c information does not include the residential population within PPP catchments. The proportioning of Residential PE at PPP WWTWs which is available to APT is from historical information held by APT. For approximate comparative purposes, the historical non-residential information held by APT for the PPP WWTWs was updated using the AIR11 trade effluent information. The updated non-residential PEs were accumulated and subtracted from the AIR11 PEs (submitted to APT by PPP) to obtain an approximation of the residential PE, as depicted in the table below.

Name of Treatment Works	Equivalent Population (From PPP Section)	APT 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	73000	12905	60095
Armagh WWTW	17350	12613	4737
Richhill WWTW	2167	447	1720
Newtownards (Ballyrickard)	29583	13751	15832
Ballynacor WWTW	142533	68282	74251
Kinnegar	73106	37635	35465
Total	337739	145633	192100

As can be seen the residential population for the PPP sites is now approximated to 192100. If this is added to the 17c figure (1205522) then the total is 1397622 which is 65251 less than the figure held in Table 13, approximately 4.46% smaller.

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 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 709, and
- the number of WWTWs with a PE greater than 100 but less than or equal to 250 (excluding tourist PE) is 86.

The table below highlights the changes in band sizes from AIR10 to AIR11

Name of Works	CAR ID	AIR10 Band Sizes	AIR11 Band Sizes	Comment
Ballysallagh WTW (Septic Tank)	6	Band 1	Decommissioned	This site has been decommissioned for AIR11
Darragh Cross (WWTW)	288	Band 3	Pumpaway	This WWTWs is now a pumpaway to Saintfield
Hooks Corner	331	Band 4	Pumpaway	This WWTWs is now a pumpaway to Lisburn (New Holland)
Seaforde (WWTW)	294	Band 3	Pumpaway	This WWTWs is now a pumpaway to Clough
Hillside Road(121)	1722	Band 1	Private	This site has been designated as private for AIR11
Gracehill Road(28)	1735	Band 1	Private	This site has been designated as private for AIR11
Creagh	1611	Band 3	Band 4	Toome is now a pumpaway to Clough
Glarryford (WTW) Septic Tank	1210	Band 1	Decommissioned	This site has been decommissioned for AIR11
Limestone (1)	3164	Band 1	Private	This site has been designated as private for AIR11
Parkgate	1424	Band 3	Pumpaway	This WWTWs is now a pumpaway to Antrim
Portballantrae (WWTW)	1168	Band 4	Pumpaway	This WWTWs is now a pumpaway for AIR11
Toome (WWTW)	1427	Band 3	Pumpaway	This WWTWs is now a pumpaway to Creagh

Name of Works	CAR ID	AIR10 Band Sizes	AIR11 Band Sizes	Comment
Coalisland	2828	Band 5	Band 4	PE updated with trade for AIR11
Donaghmore (WWTW)	2840	Band 4	Band 3	PE updated with trade for AIR11
Killyman	2847	Band 3	Pumpaway	This WWTWs is now a pumpaway to Dungannon
Milltown (Benburb)	2550	Band 2	Pumpaway	This WWTWs is now a pumpaway to Benburb
Robinsonstown	2419	Band 3	Band 2	PE for this site was updated for AIR11 following an APT house count
Fivemiletown (WWTW)	3113	Band 4	Band 3	PE updated as a result of a F&L survey and further updated with trade for AIR11
Lack	3154	Band 2	Band 1	PE for this site was updated for AIR11 following information from consultants, McAdams Design.

The table below highlights the changes in treatment category from AIR10 to AIR11.

Name of Works	CAR ID	AIR10 Treatment Category	AIR11 Treatment Category	Comment
Annahilt (WWTW)	317	Sec Act	Ter A2	Ops confirmed that Sand Filter is present at this WWTWs
Ballyhalbert Old (Retention Tank)	215	Sea Out Screen	Prim	This WWTWs was upgraded for AIR11
Ballysallagh WTW (Septic Tank)	6	Prim	Decommissioned	This WWTWs has been decommissioned for AIR11
Darragh Cross (WWTW)	288	Sec Act	Pumpaway	This WWTWs has been pumped away for AIR11

Name of Works	CAR ID	AIR10 Treatment Category	AIR11 Treatment Category	Comment
Hooks Corner	331	Ter A1	Pumpaway	This WWTWs has been pumped away for AIR11
Ravarnet	319	Sec Bio	Ter B1	This WWTWs was upgraded for AIR11
Seaforde (WWTW)	294	Ter B1	Pumpaway	This WWTWs has been pumped away for AIR11
Hillside Road(121)	1722	Prim	Private	This WWTWs has been designated as private for AIR11
Gracehill Road(28)	1735	Prim	Private	This site has been designated as private for AIR11
Bushmills (WWTW)	1178	Sec Bio	Sec Act	This WWTWs was upgraded for AIR11
Cargan (WWTW)	1433	Ter B1	Sec Bio	This WWTWs was upgraded for AIR11
Cloughmills (WWTW)	1096	Ter B1	Sec Bio	This WWTWs was upgraded for AIR11
Coagh (WWTW)	1562	Ter B1	Sec Bio	This WWTWs was upgraded for AIR11
Glarryford (WTW) Septic Tank	1210	Prim	Decommissioned	This WWTWs has been decommissioned for AIR11
Limestone (1)	3164	Prim	Private	This WWTWs has been designated as private for AIR11
Maghera (L/Derry)	1629	Ter B1	Sec Bio	This WWTWs was upgraded for AIR11
Parkgate	1424	Ter B1	Pumpaway	This WWTWs has been pumped away for AIR11
Portballantrae (WWTW)	1168	Prim	Pumpaway	This WWTWs is now a pumpaway for AIR11
Seacon	1122	Sec Act	Sec Bio	This WWTWs was upgraded for AIR11
Toome (WWTW)	1427	Sec Bio	Pumpaway	This WWTWs has been pumped away for AIR11
Annaghmore (WWTW)	2556	Sec Act	Sec Bio	This WWTWs was upgraded for AIR11

Name of Works	CAR ID	AIR10 Treatment Category	AIR11 Treatment Category	Comment
Annaghugh (WWTW)	2602	Sec Act	Sec Bio	This WWTWs was upgraded for AIR11
Armagh Road(202-206)	2250	Prim	Sec Bio	This works previously only had primary treatment but upgraded for AIR11
Ballyward	2120	Prim	Sec Bio	This WWTWs was upgraded for AIR11
Coalisland	2828	Sec Bio	Ter A1	This WWTWs was upgraded for AIR11
Drumnaferry	2405	Sec Act	Sec Bio	This WWTWs was upgraded for AIR11
Feumore (WWTW)	2406	Sec Act	Sec Bio	This WWTWs was upgraded for AIR11
Killyman	2847	Sec Bio	Pumpaway	This WWTWs has been pumped away for AIR11
Madden (WWTW)	2587	Sec Act	Sec Bio	This WWTWs was upgraded for AIR11
Maghery (WWTW)	2414	Sec Act	Sec Bio	This WWTWs was upgraded for AIR11
Maytown Road	2275	Prim	Sec Bio	This WWTWs was upgraded for AIR11
Milltown (Benburb)	2550	Sec Bio	Pumpaway	This WWTWs has been pumped away for AIR11
Ballymonie	3019	Sec Act	Sec Bio	This WWTWs was upgraded for AIR11
Donagheady (WWTW)	3079	Sec Act	Sec Bio	This WWTWs was upgraded for AIR11
Dungiven	3101	Ter B1	Sec Bio	This WWTWs was upgraded for AIR11

**Difference between AIR10 and AIR11 for total in Table 17c
(column 11, row 7)**

Total Number of Works for AIR 10 -	1058
Total Number of Works for AIR 11 -	1045
Total Difference -	13

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 AIR10 to present are summarised below:

Line	Number Reported AIR10	Number Reported AIR11	Difference	Comment
8	48	46	2	2 new sites- Draperstown, Kinawley 4 sites removed- Hooks Corner, Mullaghglass (Antrim), Ballycastle, Hamiltonsbawn
9	41	46	5	8 new sites- Clough, Ringneil, Moneymore, Annsborough, Castlecaulfield, Hamiltonsbawn, Dungiven, Limavady 3 sites removed – Ballyvoy, Florencecourt, Kinawley

PPP only**Lines 1 - 6 – Small and Large Works**

Based on the calculated loads treated at the PPP sewage works in the AIR11 Reporting period, there is one change to the size bands. The one change relates to Armagh WwTW which is now determined to be a Size Band 5 works due to its average daily BOD Load (Kg/d) being within the range for Band 5. There are no changes to the PPP sewage works treatment categories. Consequently there is only one change to the data in these lines from AIR10.

Line 9 - Number of small STWs with NH3 consent

The change in Armagh from Size Band 6 to Size Band 5 has resulted in it being reclassified as a Small Works. Given it has an ammonia consent; it therefore results in a change in Line 9 from one works (Richhill) in AIR10 to two works (Armagh & Richhill) in AIR11.

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 AIR11 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	TOTAL	CG
			TREATMENT CATEGORY												
			PRIMARY	SECONDARY		TERTIARY				SEA OUTFALLS					
	ACTIVATED SLUDGE	BIOLOGICAL	A1	A2	B1	B2	PRELIMINARY TREATMENT	SCREENED	UNSCREENED						
A SMALL WORKS															
1	Load received by STWs in size band 1	kg BOD5/day	0												
2	Load received by STWs in size band 2	kg BOD5/day	0												
3	Load received by STWs in size band 3	kg BOD5/day	0												
4	Load received by STWs in size band 4	kg BOD5/day	0				130							130	B3
5	Load received by STWs in size band 5	kg BOD5/day	0					1,041						1,041	B3
B LARGE WORKS															
6	Load received by STWs in size band 6	kg BOD5/day	0		4,386			14,707						19,093	B3
7	Total loads rec'd (daily average all size bands)	kg BOD5/day	0		4,386		130	15,748						20,264	B3
C SMALL WORKS WITH AMMONIA CONSENTS															
8	Load rec'd by small STW w. NH3 consent (5 - 10mg/l)	kg BOD5/day	0											0	
9	Load rec'd by small STW w. NH3 consents (<= 5mg/l)	kg BOD5/day	0											1,171	

Table 17d - Sewage treatment works loads**General**

The Asset Management Section (AMS) has co-ordinated information from PPP for the population of 'Table 17d – total' table, and the associated commentary.

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 AIR10, PEs for 136 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.

1058 WWTWs were reported on in Table 17d for AIR10. Hence there has been an overall net reduction of 13 in the number of WWTWs being reported on, which is summarised as follows:

- a. 8 WWTWs (Darragh Cross, Hooks Corner, Seaforde, Parkgate, Portballintrae, Toome, Killyman & Milltown (Benburb)) were pumped to other works
- b. 5 WWTWs (Hillside Rd (121), Limestone (1), Ballysallagh (WTW), Glarryford (WTW) Septic Tank & Gracehill (28)) have been decommissioned,

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.

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)

The total number of WWTWs in Table 17C line 7 is the total of all works in this table i.e. 1045 including the screened outfalls (4 No.) and the unscreened outfalls (13 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 AIR10, as although the PE confidence grade is still C5 (due to the theoretical derivation) there is greater confidence in the process categories for the WWTWs, which warrants the raising of grade from C5 to C3.

The total load of 108714 kg BOD/day from all NIW (only) WWTWs reconciles with the Total load entering sewerage system (BOD/year) of 39680.5 t BOD/year, from Table 15 line 5.

The Total load receiving primary treatment in table 17d (line 7, column 1) of 504 kg BOD/day is consistent (allowing for rounding up/down and conversions) with total load receiving primary treatment in table 15 (line 3) of 184.1 t BOD/yr.

The Total load receiving secondary and tertiary treatment in table 17d (line 7, sum of columns 2–7) i.e. 105594 kg BOD/day is consistent with total load receiving secondary treatment in table 15 (line 2) i.e. 38541.8 t BOD/yr.

The Total load receiving preliminary treatment in table 17d (line 7, column 8) of 1517 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 553.5 t BOD/yr.

The table bellows depicts changes in PEs at WWTWs from AIR10 to AIR11

It is presently difficult to state significant changes in WWTWs loads which will occur in the near future, as APT is endeavouring to encourage Flow and Load surveys to be carried out at WWTWs at which improvements/upgrades are proposed. It is difficult to predict how this information will compare with the theoretical PEs held by APT.

Significant changes which will occur in the short to medium term with respect to rationalization of WWTWs will include the pumpaway of Portavogie WWTWs to Ballyhalbert WWTWs, Aird WWTWs and Giant's Causeway WWTWs to Bushmills WWTWs, Castledawson WWTWs to Magherafelt WWTWs and Mullaghbane WWTWs to Forkhill WWTWs. A significant change which may occur to PEs, during the next financial year, may be as a result of an increased focus on Flow and Load Surveys, in an effort to increase the confidence grades of the PEs at NIW's WWTWs.

The following table depicts how PE changes have occurred at WWTWs during the last financial year.

Name of Works	CAR ID	AIR10 Actual Pe	AIR11 Actual PE	Difference in AIR10 & AIR11 Actual PE (-ve indicates AIR11 figure larger)	AIR10 Band Sizes	AIR11 Band Sizes	Change Band Size from AIR10
Annahilt (WWTW)	317	1756	1751	5	Band 3	Band 3	
Ardglass (WWTW)	268	3414	2694	720	Band 4	Band 4	
Ballysallagh WTW (Septic Tank)	6	3	Decommissioned	3	Band 1	Decommissioned	Y
Ballynahinch (Down)	311	7996	7954	42	Band 4	Band 4	
Carrickfergus (WWTW)	261	32091	32035	56	Band 6	Band 6	
Clough (WWTW)	296	602	1128	-526	Band 3	Band 3	
Darragh Cross (WWTW)	288	622	Pumpaway	622	Band 3	Pumpaway	Y
Downpatrick (WWTW)	771	18446	17153	1293	Band 5	Band 5	
Dromara (WWTW)	316	1388	1385	3	Band 3	Band 3	
Belfast (WWTW)	345	365866	358525	7341	Band 6	Band 6	

Name of Works	CAR ID	AIR10 Actual Pe	AIR11 Actual PE	Difference in AIR10 & AIR11 Actual PE (-ve indicates AIR11 figure larger)	AIR10 Band Sizes	AIR11 Band Sizes	Change Band Size from AIR10
Dunmurry	346	45827	45727	100	Band 6	Band 6	
Greenisland (WWTW)	263	9569	9574	-5	Band 4	Band 4	
Hooks Corner	331	3466	Pumpaway	3466	Band 4	Pumpaway	Y
Kilkeel (WWTW)	313	11104	10362	742	Band 5	Band 5	
Killinchy (WWTW)	252	3111	2767	344	Band 4	Band 4	
Killyleagh (WWTW)	273	7553	7233	320	Band 4	Band 4	
Lisburn (New Holland)	329	63012	65704	-2691	Band 6	Band 6	
Newcastle (WWTW)	303	16261	16236	25	Band 5	Band 5	
Newtownbreda (WWTW)	342	40199	40011	188	Band 6	Band 6	
Portavogie(Retention Tank)	209	3276	3233	43	Band 4	Band 4	
Larne (WWTW)	2044	28228	28040	188	Band 6	Band 6	

Name of Works	CAR ID	AIR10 Actual Pe	AIR11 Actual PE	Difference in AIR10 & AIR11 Actual PE (-ve indicates AIR11 figure larger)	AIR10 Band Sizes	AIR11 Band Sizes	Change Band Size from AIR10
Saintfield (WWTW)	290	4433	5057	-624	Band 4	Band 4	
Seaforde (WWTW)	294	526	Pumpaway	526	Band 3	Pumpaway	Y
Seahill (WWTW)	774	6795	6795	0	Band 4	Band 4	
Whitehouse	265	88410	87947	463	Band 6	Band 6	
Glenstaghey Road(11)	1787	6	10	-4	Band 1	Band 1	
Hillside Road(121)	1722	6	Private	6	Band 1	Private	Y
Gracehill Road(28)	1735	6	Private	6	Band 1	Private	Y
Ballycastle (WWTW)	1071	14015	14016	-1	Band 5	Band 5	
Ballyclare	1467	18708	18527	181	Band 5	Band 5	
Ballyronan (WWTW)	1558	989	986	3	Band 3	Band 3	
Bushmills (WWTW)	1178	2653	5342	-2688	Band 4	Band 4	
Castledawson	1609	1298	1329	-31	Band 3	Band 3	

Name of Works	CAR ID	AIR10 Actual Pe	AIR11 Actual PE	Difference in AIR10 & AIR11 Actual PE (-ve indicates AIR11 figure larger)	AIR10 Band Sizes	AIR11 Band Sizes	Change Band Size from AIR10
Corvanaghan (WWTW)	1565	6	18	-12	Band 1	Band 1	
Creagh	1611	572	2046	-1474	Band 3	Band 4	Y
Draperstown	1615	3294	3296	-2	Band 4	Band 4	
Drumconvis Road(16-18)	1801	3	6	-3	Band 1	Band 1	
Garvagh (WWTW)	1154	2257	2245	12	Band 4	Band 4	
Glarryford (WTW) Septic Tank	1210	3	Decommissioned	3	Band 1	Decommissioned	Y
Glenstall	1109	17894	20524	-2630	Band 5	Band 5	
Keenaghan (1)	1578	6	12	-6	Band 1	Band 1	
Cookstown (WWTW)	1582	20717	19534	1183	Band 5	Band 5	
Magherafelt (WWTW)	1621	14644	14548	96	Band 5	Band 5	
Kilrea	1156	2761	2814	-53	Band 4	Band 4	
Limestone (1)	3164	6	Private	6	Band 1	Private	Y
Lisnahall	1587	50	47	3	Band 1	Band 1	

Name of Works	CAR ID	AIR10 Actual Pe	AIR11 Actual PE	Difference in AIR10 & AIR11 Actual PE (-ve indicates AIR11 figure larger)	AIR10 Band Sizes	AIR11 Band Sizes	Change Band Size from AIR10
Longfield (Moorside Villas)	1627	95	93	2	Band 1	Band 1	
Martinstown	1445	611	612	-1	Band 3	Band 3	
Antrim (WWTW)	1422	65165	65510	-344	Band 6	Band 6	
Moneymore (WWTW)	1589	2804	2821	-17	Band 4	Band 4	
Mullanahoe (WWTW)	2043	1159	1158	1	Band 3	Band 3	
Parkgate	1424	797	Pumpaway	797	Band 3	Pumpaway	Y
Portballantrae (WWTW)	1168	2694	Pumpaway	2694	Band 4	Pumpaway	Y
Rasharkin	1120	1551	1548	3	Band 3	Band 3	
Roughfort (WWTW)	1470	431	453	-22	Band 2	Band 2	
Seacon	1122	100	95	5	Band 1	Band 1	
Toome (WWTW)	1427	1474	Pumpaway	1474	Band 3	Pumpaway	Y

Name of Works	CAR ID	AIR10 Actual Pe	AIR11 Actual PE	Difference in AIR10 & AIR11 Actual PE (-ve indicates AIR11 figure larger)	AIR10 Band Sizes	AIR11 Band Sizes	Change Band Size from AIR10
Ballymena (WWTW)	1456	113825	84676	29149	Band 6	Band 6	
Tully Road Headworks	3975	2164	2158	6	Band 4	Band 4	
Annaghugh (WWTW)	2602	312	323	-11	Band 2	Band 2	
Annsborough	2687	6877	5939	938	Band 4	Band 4	
Ardress (WWTW)	2557	90	123	-33	Band 1	Band 1	
Banbridge (WWTW)	2102	23204	23214	-10	Band 5	Band 5	
Benburb (WWTW)	2831	820	1078	-258	Band 3	Band 3	
Bantry	2832	18	26	-8	Band 1	Band 1	
Caledon (WWTW)	2835	1478	1427	51	Band 3	Band 3	
Coalisland	2828	12095	9823	2272	Band 5	Band 4	Y
Derryhale	2570	1151	1158	-7	Band 3	Band 3	
Diviny	2403	17	19	-2	Band 1	Band 1	

Name of Works	CAR ID	AIR10 Actual Pe	AIR11 Actual PE	Difference in AIR10 & AIR11 Actual PE (-ve indicates AIR11 figure larger)	AIR10 Band Sizes	AIR11 Band Sizes	Change Band Size from AIR10
Donaghmore (WWTW)	2840	2151	1825	326	Band 4	Band 3	Y
Dromore (Down)	2127	7666	7523	143	Band 4	Band 4	
Drumnaferry	2405	114	122	-8	Band 1	Band 1	
Drumhillery	2574	75	71	4	Band 1	Band 1	
Dyan	2842	52	63	-12	Band 1	Band 1	
Feumore (WWTW)	2406	75	74	1	Band 1	Band 1	
Forkhill	2270	727	708	19	Band 3	Band 3	
Gilford (WWTW)	2162	2480	2480	0	Band 4	Band 4	
Hilltown (WWTW)	2701	2148	2151	-3	Band 4	Band 4	
Keady (Armagh)	2553	4579	4574	5	Band 4	Band 4	
Killeen (Tyrone)	2846	532	568	-36	Band 3	Band 3	
Killyman	2847	948	Pumpaway	948	Band 3	Pumpaway	Y
Lisnalea	2274	72	75	-3	Band 1	Band 1	

Name of Works	CAR ID	AIR10 Actual Pe	AIR11 Actual PE	Difference in AIR10 & AIR11 Actual PE (-ve indicates AIR11 figure larger)	AIR10 Band Sizes	AIR11 Band Sizes	Change Band Size from AIR10
Madden (WWTW)	2587	143	144	-1	Band 1	Band 1	
Maghery (WWTW)	2414	290	363	-73	Band 2	Band 2	
Markethill	2591	2853	2851	2	Band 4	Band 4	
Milltown (Benburb)	2550	258	Pumpaway	258	Band 2	Pumpaway	Y
Moira	2429	5381	5085	296	Band 4	Band 4	
Montieth	2152	160	216	-56	Band 1	Band 1	
Mountjoy (Dungannon)	2849	452	489	-37	Band 2	Band 2	
Mountain View (Drumintee)	2278	36	70	-34	Band 1	Band 1	
Moy (WWTW)	2859	3970	3327	643	Band 4	Band 4	
Dungannon	2850	61180	59767	1413	Band 6	Band 6	
Mullaghbane (Forkhill)	2279	879	1038	-159	Band 3	Band 3	
Newry (WWTW)	2685	63915	59943	3972	Band 6	Band 6	

Name of Works	CAR ID	AIR10 Actual Pe	AIR11 Actual PE	Difference in AIR10 & AIR11 Actual PE (-ve indicates AIR11 figure larger)	AIR10 Band Sizes	AIR11 Band Sizes	Change Band Size from AIR10
Robinsonstown	2419	516	494	22	Band 3	Band 2	Y
Silverbridge	2285	145	170	-25	Band 1	Band 1	
Lisnagade Road(54-56)	2161	6	8	-2	Band 1	Band 1	
Tamnamore (WWTW)	2862	634	621	13	Band 3	Band 3	
Tandragee	2174	8352	8621	-269	Band 4	Band 4	
Warrenpoint (WWTW)	2720	14939	14918	21	Band 5	Band 5	
Aghanloo (1)	2989	540	552	-12	Band 3	Band 3	
Arvalee	3003	66	60	6	Band 1	Band 1	
Aughil (WWTW)	3006	116	109	7	Band 1	Band 1	
Aughnacloy	3007	1901	1900	1	Band 3	Band 3	
Ballykelly (L/Derry)	3016	4813	4818	-5	Band 4	Band 4	
Ballyquinn (WWTW)	3021	100	101	-1	Band 1	Band 1	

Name of Works	CAR ID	AIR10 Actual Pe	AIR11 Actual PE	Difference in AIR10 & AIR11 Actual PE (-ve indicates AIR11 figure larger)	AIR10 Band Sizes	AIR11 Band Sizes	Change Band Size from AIR10
Belleek (Fermanagh)	3024	1689	1682	7	Band 3	Band 3	
Benone (WWTW)	3026	3305	3347	-42	Band 1	Band 1	
Camus	3034	102	95	6	Band 1	Band 1	
Castlederg (WWTW)	3042	4873	4880	-7	Band 4	Band 4	
Omagh (WWTW)	3999	48791	40494	8297	Band 6	Band 6	
Culmore (WWTW)	3071	131187	132355	-1168	Band 6	Band 6	
Derrygonnelly (WWTW)	3074	857	907	-50	Band 3	Band 3	
Donagheady (WWTW)	3079	192	188	4	Band 1	Band 1	
Donnybrewer	3080	5175	5149	26	Band 4	Band 4	
Dooish	3081	121	142	-21	Band 1	Band 1	
Drumavally	3087	603	608	-5	Band 3	Band 3	
Dungiven	3101	4760	4760	0	Band 4	Band 4	

Name of Works	CAR ID	AIR10 Actual Pe	AIR11 Actual PE	Difference in AIR10 & AIR11 Actual PE (-ve indicates AIR11 figure larger)	AIR10 Band Sizes	AIR11 Band Sizes	Change Band Size from AIR10
Donemana	3103	941	814	127	Band 3	Band 3	
Enniskillen	3218	24365	24233	132	Band 5	Band 5	
Fintona (WWTW)	3112	1978	1979	-1	Band 3	Band 3	
Fivemiletown (WWTW)	3113	2134	1693	442	Band 4	Band 3	Y
Glack (WWTW)	3118	142	233	-91	Band 1	Band 1	
Kesh (WWTW)	3140	2702	2679	23	Band 3	Band 3	
Killaloo	3142	88	92	-4	Band 1	Band 1	
Lack	3154	267	181	86	Band 2	Band 1	Y
Letterbin (WWTW)	3158	60	59	0	Band 1	Band 1	
Limavady (WWTW)	3162	16177	16164	13	Band 5	Band 5	
Lisnaskea (WWTW)	3171	6441	6393	48	Band 4	Band 4	
Magheramason	3177	600	593	7	Band 3	Band 3	
Newtownstewart (WWTW)	3202	2177	2175	2	Band 4	Band 4	

Name of Works	CAR ID	AIR10 Actual Pe	AIR11 Actual PE	Difference in AIR10 & AIR11 Actual PE (-ve indicates AIR11 figure larger)	AIR10 Band Sizes	AIR11 Band Sizes	Change Band Size from AIR10
Newtownbutler (WWTW)	3200	1735	1734	1	Band 3	Band 3	
Seskinore	3217	261	298	-37	Band 2	Band 2	
Strabane	3223	20782	23026	-2244	Band 5	Band 5	
Tattysallagh	3227	84	70	14	Band 1	Band 1	
North Coast (WWTWs)	4150	76115	75863	252	Band 6	Band 6	
			Total	57101			

The change in Pe equates to a reduction in load of **3426.06kg BOD/day** (i.e. 57101×0.06 for 60g/hd/day) from AIR10 to AIR11

Difference between AIR11 and AIR10 for the total load entering WWTWs as shown in Table 17d - column 11, row 7

Total Load Received at WWTWs for AIR10 -	112139.9
Total Load Received at WWTWs for AIR 11 -	108713.8
Total Difference -	3426.1

The interpretation of the treatment categories is as below:-

AIR11 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

AIR11 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 AIR10 to AIR11.

Name of Works	CAR ID	AIR10 Actual Pe	AIR11 Actual PE	PE Change (-ve Indicates AIR11 PE Higher)	Comments
Dromara (WWTW)	316	1388	1385	3	PE updated with trade for AIR11
Hooks Corner	331	3466	Pumpaway	3466	This WWTWs has been pumped away for AIR11
Mullaghglass (Antrim)	325	184	184	184	This WWTWs no longer has an Ammonoa consent of between 5-10 for AIR11
Ballycastle (WWTW)	1071	14015	14016	14015	This WWTWs no longer has an Ammonoa consent of between 5-10 for AIR11
Ballyronan (WWTW)	1558	989	986	3	PE updated with trade for AIR11
Draperstown	1615	3294	3296	-3296	The WWTWs has an Ammonia consent of 5-10 for the first time for AIR11
Magherafelt (WWTW)	1621	14644	14548	96	PE updated with trade for AIR11
Coalisland	2828	12095	9823	2272	PE updated with trade for AIR11
Derryhale	2570	1151	1158	-7	PE updated with trade for AIR11
Donaghmore (WWTW)	2840	2151	1825	326	PE updated with trade for AIR11
Hamiltonsbawn	2603	1005	1005	1005	This WWTWs no longer has an Ammonoa consent of between 5-10 for AIR11
Hilltown (WWTW)	2701	2148	2151	-3	PE updated with trade for AIR11

Name of Works	CAR ID	AIR10 Actual Pe	AIR11 Actual PE	PE Change (-ve Indicates AIR11 PE Higher)	Comments
Markethill	2591	2853	2851	2	PE updated with trade for AIR11
Derrygonnelly (WWTW)	3074	857	907	-50	PE for this site was updated for AIR11 following an APT house count
Enniskillen	3218	24365	24233	132	PE updated with trade for AIR11
Fintona (WWTW)	3112	1978	1979	-1	PE updated with trade for AIR11
Kesh (WWTW)	3140	2702	2679	23	PE updated with trade for AIR11
Kinawley	3149	381	381	-381	The WWTWs has an Ammonia consent of 5-10 for the first time for AIR11
Lack	3154	267	181	86	PE for this site was updated for AIR11 following information from consultants, McAdams Design.
Lisnaskea (WWTW)	3171	6441	6393	48	PE updated with trade for AIR11
Newtownstewart (WWTW)	3202	2177	2175	2	PE updated with trade for AIR11
Strabane	3223	20782	23026	-2244	PE updated with trade for AIR11
			Total	15682	

The change in Pe equates to a reduction in load of 940.92kg/d (i.e. 15682 x 0.06 for 60g/hd/day) from AIR10 to AIR11, for line 8

Total Load rec'd by small WWTWs with NH3 consents (5-10mg/l) for AIR10-	912.5
Total Load rec'd by small WWTWs with NH3 consents (5-10mg/l) for AIR11-	817.5
Total Difference -	94

Changes in Line 9 - Small Works with Ammonia Consent (between 0 and 5) from AIR10 to AIR11.

Name of Works	CAR ID	AIR10 Actual Pe	AIR11 Actual PE	PE Change (-ve Indicates AIR11 PE Higher)	Comments
Annahilt (WWTW)	317	1756	1751	5	PE updated with trade for AIR11
Ballynahinch (Down)	311	7996	7954	42	PE updated with trade for AIR11
Clough (WWTW)	296	602	1128	-1128	This works has ammonia consent of between 0-5 for the first time for AIR11
Downpatrick (WWTW)	771	18446	17153	1293	PE updated with trade for AIR11
Killinchy (WWTW)	252	3111	2767	344	PE updated with trade for AIR11
Ringneill (WWTW)	237	673	673	-673	This works has ammonia consent of between 0-5 for the first time for AIR11
Ballyclare	1467	18708	18527	181	PE updated with trade for AIR11
Ballyvoy	1177	289	289	289	This WWTWs no longer has a ammonia consent of between 0-5
Garvagh (WWTW)	1154	2257	2245	12	PE updated with trade for AIR11
Cookstown (WWTW)	1582	20717	19534	1183	PE updated with trade for AIR11
Moneymore (WWTW)	1589	2804	2821	-2821	This works has ammonia consent of between 0-5 for the first time for AIR11
Annsborough	2687	6877	5939	-5939	This works has ammonia consent of between 0-5 for the first time for AIR11
Banbridge (WWTW)	2102	23204	23214	-10	PE updated with trade for AIR11
Castlecaulfield (WWTW)	2836	1069	1069	-1069	This works has ammonia consent of between 0-5 for the first time for AIR11
Dromore (Down)	2127	7666	7523	143	PE updated with trade for AIR11

Name of Works	CAR ID	AIR10 Actual Pe	AIR11 Actual PE	PE Change (-ve Indicates AIR11 PE Higher)	Comments
Hamiltonsbawn	2603	1005	1005	-1005	This works has ammonia consent of between 0-5 for the first time for AIR11
Moira	2429	5381	5085	296	PE updated with trade for AIR11
Robinsonstown	2419	516	494	22	PE for this site was updated for AIR11 following an APT house count
Tandragee	2174	8352	8621	-269	PE updated with trade for AIR11
Dungiven	3101	4760	4760	-4760	This works has ammonia consent of between 0-5 for the first time for AIR11
Florencecourt	3114	289	289	289	This WWTWs no longer has a ammonia consent of between 0-5
Kinawley	3149	381	381	381	This WWTWs no longer has a ammonia consent of between 0-5
Limavady (WWTW)	3162	16177	16164	-16164	This works has ammonia consent of between 0-5 for the first time for AIR11
Newtownbutler (WWTW)	3200	1735	1734	1	PE updated with trade for AIR11
			Total	-29357	

The change in Pe equates to an increase in load of -1761.42kg/d (i.e. 29357 x 0.06 for 60g/hd/day) from AIR10 to AIR11 for line 9.

Total Load rec'd by small WWTWs with NH3 consents (0-5mg/l) for AIR10-	9524.4
Total Load rec'd by small WWTWs with NH3 consents (0-5mg/l) for AIR11-	11285.8
Total Difference -	-1761.4

Table 17d – PPP Only

Lines 1 – 7

The variation in load data from AIR 10 is solely due to the variation in influent loads received by the same PPP works from the NI Water catchments over the AIR 11 Period.

Line 9

The variation in load data is due to

- (i) the variation in influent loads received by the Richhill STW over the AIR 11 Period and also,
- (ii) Armagh WWTW loads arising from the reclassification of Armagh as a small works with an ammonia standard.

Specific Company Commentary

- There have been no changes to the number of PPP operated STW's in Treatment Category; the Size Band determination for Armagh has changed due to its Average Daily BOD (Kg/d) being located within the Size Band 5 range.
- There are currently no plans to close, or divert flows arriving to, PPP operated works.

Confidence Grades for Total - Lines 1 - 7

The confidence grade for all lines is C3 to reflect that for the 'NIW only' WWTWs, due to the smaller loads associated with the PPP WWTWs.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17f SEWERAGE EXPLANATORY FACTORS
SEWERAGE 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	31.485	69.792	384.367	2.307	0.000	5.119	6.769	0.000	0.000	14.555	514.393
2	Direct costs of STWs in size band 2	£000	3	0.000	95.802	242.060	31.337	0.000	66.387	0.000	5.062	12.465	0.000	453.112
3	Direct costs of STWs in size band 3	£000	3	23.474	569.112	1,007.189	103.887	117.445	158.572	136.579	16.514	14.377	63.553	2,210.701
4	Direct costs of STWs in size band 4	£000	3	46.149	2,243.409	733.586	140.435	297.848	96.021	108.465	64.274	52.805	19.606	3,802.597
5	Direct costs of STWs in size band 5	£000	3	0.000	865.562	0.000	224.476	955.356	0.000	124.856	146.037	0.000	0.000	2,316.287
B LARGE WORKS														
6	Direct costs of STWs in size band 6	£000	3	0.000	2,856.705	0.000	1,191.121	1,411.766	0.000	0.000	0.000	0.000	0.000	5,459.592
C ALL WORKS														
7	Total direct costs of STWs - all sizes	£000	3	101.107	6,700.381	2,367.201	1,693.563	2,782.414	326.098	376.669	231.886	79.647	97.714	14,756.682
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	101.107	6,700.381	2,367.201	1,693.563	2,782.414	326.098	376.669	231.886	79.647	97.714	14,756.682
10	Sewage Treatment: Power costs	£000	3	53.695	3,558.373	1,257.150	899.401	1,477.657	173.181	200.038	123.148	42.298	51.893	7,836.834
11	Sewage Treatment: service charges	£000	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	Sewage Treatment: General and Support	£000	3	141.719	3,346.564	2,162.028	1,113.798	1,123.270	300.107	298.467	209.296	86.265	96.487	8,878.000
13	Sewage Treatment: Functional Expenditure	£000	3	242.826	10,046.945	4,529.229	2,807.361	3,905.685	626.205	675.136	441.182	165.912	194.201	23,634.682

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 17f SEWERAGE EXPLANATORY FACTORS
SEWERAGE TREATMENT WORKS - COSTS (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 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				37.854						37.854
5	Direct costs of STWs in size band 5	£000	3					100.361					100.361
B LARGE WORKS													
6	Direct costs of STWs in size band 6	£000	3					1,716.955					1,716.955
C ALL WORKS													
7	Total direct costs of STWs - all sizes	£000	3	0.000	0.000	0.000	37.854	1,817.316	0.000	0.000	0.000	0.000	1,855.170
8	Sludge Treatment and Disposal Adjustments	£000	3										0.000
9	Sewage Treatment: Direct costs	£000	3				37.854	1,817.316					1,855.170
10	Sewage Treatment: Power costs	£000	3				37.854	1,817.316					1,855.170
11	Sewage Treatment: service charges	£000	3										0.000
12	Sewage Treatment: General and Support (NIW)	£000	3		40.573		23.594	94.376					158.543
13	Sewage Treatment: Functional Expenditure	£000	3	0.000	40.573	0.000	61.448	1,911.692	0.000	0.000	0.000	0.000	2,013.713

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	31.485	69.792	384.367	2.307	0.000	5.119	6.769	0.000	0.000	14.555	514.393
2	Direct costs of STWs in size band 2	£000	3	0.000	95.802	242.060	31.337	0.000	66.387	0.000	5.062	12.465	0.000	453.112
3	Direct costs of STWs in size band 3	£000	3	23.474	569.112	1,007.189	103.887	117.445	158.572	136.579	16.514	14.377	63.553	2,210.701
4	Direct costs of STWs in size band 4	£000	3	46.149	2,243.409	733.586	178.289	297.848	96.021	108.465	64.274	52.805	19.606	3,840.451
5	Direct costs of STWs in size band 5	£000	3	0.000	865.562	0.000	224.476	1,055.717	0.000	124.856	146.037	0.000	0.000	2,416.648
B LARGE WORKS														
6	Direct costs of STWs in size band 6	£000	3	0.000	2,856.705	0.000	1,191.121	3,128.721	0.000	0.000	0.000	0.000	0.000	7,176.547
C ALL WORKS														
7	Total direct costs of STWs - all sizes	£000	3	101.107	6,700.381	2,367.201	1,731.417	4,599.730	326.098	376.669	231.886	79.647	97.714	16,611.852
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	101.107	6,700.381	2,367.201	1,731.417	4,599.730	326.098	376.669	231.886	79.647	97.714	16,611.852
10	Sewage Treatment: Power costs	£000	3	53.695	3,558.373	1,257.150	937.255	3,294.973	173.181	200.038	123.148	42.298	51.893	9,692.004
11	Sewage Treatment: service charges	£000	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	Sewage Treatment: General and Support	£000	3	141.719	3,387.137	2,162.028	1,137.392	1,217.646	300.107	298.467	209.296	86.265	96.487	9,036.543
13	Sewage Treatment: Functional Expenditure	£000	3	242.826	10,087.518	4,529.229	2,868.809	5,817.377	626.205	675.136	441.182	165.912	194.201	25,648.395

Table 17f - Sewage Treatment Works**NIW Only****Lines 1 - 13**

An updated Population Equivalent (PE) database with treatment type by WWTW's was sent from Michael Kelly on the 19th May 2011 which was used to populate Line 1-6. No PPP sites are included in this table as they are all operated by PPP in 201011. Ballycastle WWTW's falls into Band 5 – Line 5. Ballycastle does not have a separate W finance location code however, it is included in an X code and these costs have been apportioned. The cost to serve project will provide costs for Ballycastle in AIR12.

Table 17f has been completed based on the figures available at for the year ended 31st March 2011 as at 6th May 2011 for sewage treatment – Activity 510 less M & E expenditure which is treated as general & support as recommended by the Utility Regulator.

A Small Works**Line 1- 4 – Size band 1 - 4**

Each WWTW's was assigned a finance location code, W or X. W codes are for a specific works and direct costs can be identified separately. X codes include the costs of a number of small works and these costs were apportioned across the appropriate WWTW's based on PE.

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).

As with all Lines 1-10, power costs for sewage treatment are based on percentage splits provided by the wastewater field managers. There remains one meter at each WWTW; so 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 total power costs at each site. There is one electricity meter at Duncrue Street which includes the costs for the Belfast WWTWs (W10) and the Incinerator (operated by PPP in 201011). The power team supplied an estimated 48:52 split between the Belfast WWTWs and the Incinerator which has been used to calculate the amount relating to sewage treatment at Belfast WWTW's. This split has changed since AIR10 where it was a 60:40 apportionment.

The type of treatment at each WWTW's was provided by M Kelly and this was used to assign costs to Column 1-10. Hooks Corner was recorded as a WWTW's in AIR10 and the costs included in Line 4, Band 4. In March 2011 this works became a pumpaway and therefore is not reported in Table 17c of AIR11. There have been costs recorded against this site during the year, therefore these cost have been included in Line 4 based on the PE and type of treatment used in AIR10.

In total the costs have decreased in Lines 1-4 from AIR10 by circa £0.2M primarily due to the reduction in power costs, a new contract has been negotiated in 201011 which has decreased power across all sites.

Coalisland WWTW's was included as a Band 5 works in AIR10 however is included as Band 4 in AIR11 as the PE has changed.

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, and therefore the costs were apportioned in the same manner as Line 1-4.

The costs against this line have decreased by circa £0.1M primarily due to the primarily due to the reduction in power costs, a new contract has been negotiated in 201011 which has decreased power across all sites.

B Large Works

Line 6 - Size band 6

This line agrees with Line 9 in Table 17b. No PPP sites have been included.

The costs have reduced from AIR10 by circa £1.5M partly a result of the exclusion of Ballynacor, Armagh and Bullays Hill which transferred to PPP in 201011. The three PPP sites, account for £0.7M of the reduction, the vast majority of this relates to power.

Power costs have decreased by £1.7M in this table across all sites, primarily due to the new power contract negotiated in 201011 which resulted in a price decrease. Power costs at Ballymena, Omagh and Newry include the terminal pumping costs as there is one electric metre at each site.

The phased introduction of cost to serve has resulted in all direct labour costs and overheads been charged to sewage treatment. In AIR10 there was a portion allocated to Sludge Treatment which would not have been included in this table. With further implementation of the cost to serve project over 201112 this will improve in AIR12. Direct Labour postings are used to make apportionments of admin activities across all the sites, and this has resulted in an increased allocation to all columns.

C All Works

Line 7 - Total Direct Costs

This is a calculated line and it's the total of Line 1-6. This figure agrees with Table 22, Column 2 Line 9.

The total direct costs have reduced since AIR10 by circa £1.7M with the main reasons being the exclusion of the PPP sites that have received service

commencement and are now operated by PPP and the reduced power costs after the new contract was negotiated in 201011.

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

Power costs relating to Sewage Treatment were apportioned across the columns based on total direct costs as in AIR10. In total the power figure has decreased by circa £1.7M. This figure agrees with Table 22, Column 2 Line 2.

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 £1.9M from AIR10, primarily due to the decrease in the direct costs. The percentage allocation used to apportion general & support to sewage treatment has also reduced. See Table 22 commentary for further explanation.

Line 13 - Functional Expenditure

This is a calculated line and is the total of Line 9 and Line 12. The total agrees to Table 22 (NIW Only) Column 2 Line 11. The total costs have reduced from AIR10 by circa £3.7M for all the reasons mentioned under the lines above. Refer to Table 22 commentary for further explanation.

PPP Only**Lines 1 - 3 – Size bands 1 - 3**

There are no PPP sites sized within these categories. Therefore, this is a nil return for these size bands.

Line 4 - Size band 4

Direct costs associated with Richhill (TA1) include power costs only derived from the Oracle system using the appropriate location code.

Line 5 - Size band 5

Direct costs associated with Armagh (TA2) include power costs only derived from the Oracle system using the appropriate location code.

Line 6 - Size band 6

No costs are reported for Kinnegar (SAS) direct costs as Kinnegar power costs are part of the Concessionaire's payment to the Operating Company. The Concessionaire has elected not to provide these costs or a breakdown of these costs. The Company is unable to report.

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 AIR10 and AIR 11.

Costs associated with TA2 category have increased for AIR 11 as a result of the inclusion of costs for Ballynacor WWTWs (£610k).

The total of this line reconciles to table 22 row 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 consultancy costs. 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. Consultancy 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. Costs are lower in 2010/11 as a result of reduced consultancy costs as the schemes have entered operational phase. The total on this line reconciles to the total included in table 22 line 10 column 2.

Consolidated - NIW Total

Lines 1 - 13

Table 17f has been completed based on the figures available for the year ended 31st March 2011 as at 6th May 2011.

The PPP only table was provided by Mary Grain on 31st May 2011 and NIW only was provided by Management Accounts.

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 AIR10. 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									1411.2	C3	28.3	C3							1439.5	C3
2 Amount of sewage sludge	ttds	1									29.9	B2	0.6	B2							30.5	B2
3 Sludge treatment: direct costs	£000	3	0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000		1,713.652		1,713.652	
4 Sludge disposal: direct costs	£000	3	0.000		0.000		0.000		0.000		2,807.718		28.690		0.000		0.000		0.000		2,836.408	
5 Sludge treatment & disposal: direct costs	£000	3	0.000		0.000		0.000		0.000		2,807.718		28.690		0.000		0.000		1,713.652		4,550.060	
6 Sludge treatment & disposal: power costs	£000	3	0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000		1,420.149		1,420.149	
7 Sludge treatment & disposal: service charges	£000	3	0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000		0.000	
8 Sludge treatment & disposal: general & support exp.	£000	3	0.000		0.000		0.000		0.000		3,416.948		0.000		0.000		0.000		49.052		3,466.000	
9 Sludge treatment & disposal: functional expenditure	£000	3	0.000		0.000		0.000		0.000		6,224.665		28.690		0.000		0.000		1,762.705		8,016.060	

Table 17g – Sewerage Explanatory Factors - Sludge Treatment and Disposal Information**Line 1 - Resident population served**

The resident population served is that reported in T17a:L1 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 2010/11 (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 C018.

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 C018.

Lines 3 - 9

The methodology has changed slightly from AIR10 as a result of the change in the disposal routes for NIW. All Sludge is now transported and disposed off at the Incinerator or another PPP site. In the past sludge would have been transported and disposed off through various routes and the costs would have been significantly higher.

The costs in Table 17g are populated with the information available for the year ended 31st March 2011 as at 6th May 2011.

Line 3 - Sludge Treatment: Direct Costs

Expenditure has been input in Column 9.

NIW operated the Incinerator in 200910 and these costs were recorded in AIR10 under Column 4. The Incinerator transferred to PPP and received service commencement in 201011 therefore there are no costs recorded in this column in AIR11. This results in a decrease in Line 3 Column 4 of circa £3.9M of which £1.5M relates to Power costs.

Sludge treatment costs for WWTW's are coded using activity 621 and can be separately identified to populate Column 9.

The phased introduction of cost to serve has resulted in minimal direct labour costs and overheads been charged to sludge treatment. With further implementation of the cost to serve project over 201112 this will improve in

AIR12. The change in direct labour postings has resulted in a decrease of £0.6M.

Sludge Treatment is carried out at Ballynacor WWTW's which was operated by NIW for part of 200910 financial year. Chemical, contractors and materials costs came to £0.4M and were included in this line in AIR10. There are no PPP costs included in AIR11.

Power costs in AIR11 do not include the Incinerator or any PPP sites. There was also a new power contract negotiated in 201011 which resulted in a price decrease. Power costs relating to sludge treatment have decreased by circa £0.6M from AIR10, £0.3M due to the exclusion of the Ballynacor WWTW's which is operated by PPP in 201011

Line 4 - Sludge Disposal: Direct Costs

Columns 5 and 6 have been populated in this line. The Sludge Disposal route for NIW has changed from AIR10 and in 2010/11 all sludge is transported and disposed of at the Incinerator or another PPP site. Total Direct Costs have decreased by circa £6.8M in total due to change in disposal routes from AIR10 e.g. no sludge has been transported to Land Restoration in England compared to AIR09 (Column 8).

There is a small costs 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 decreased by circa £12.3M from AIR10, due to the Incinerator transferring and being operated by PPP in 201011.

Line 6 - Sludge Treatment & Disposal: Power Costs

Power costs associated with Sludge Treatment are used to populate Column 9. The power team supplied a split between the Incinerator and Belfast WWTW's which was used apportion a cost to the works. No costs for the Incinerator have been included in this table in AIR11. This has resulted in a decrease of £1.5M from AIR10 Column 4.

There is only one electric metre at each WWTW's so an estimate was received for each WWTW's from the wastewater field mangers so that a split could be calculated at each works between sludge and sewage treatment at the sites where both activities occur. This is included under Column 9 and has reduced by circa £0.6M from AIR10. Primarily this is due to the negotiation of a new power contract which has decreased the price, and also due to the transfer of the remaining sites to PPP, Ballynacor Sludge power cost £0.3M in AIR10.

Line 7 - Sludge treatment & disposal: Service Charges

There are no costs reported in this line.

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 in AIR10. The reduction in costs from AIR10 of circa £2.4M is primarily due to the reduction in total direct costs and also the reduction in the percentages used to apportion general and Support. See Table 21 & 22 Commentary for further explanation.

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 £14.8M from AIR10 primarily due to the change in disposal routes.

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
				2008-09	2009-10	2010-11
1	Turnover	£m	3	327.395	347.569	345.740
2	Operating costs (excluding HCD)	£m	3	-241.458	-234.938	-212.643
3	Historical cost depreciation	£m	3	-17.767	-25.055	-41.689
4	Operating income	£m	3	0.094	0.264	0.108
5	Operating profit	£m	3	68.264	87.840	91.516
6	Other income	£m	3	0.000	0.000	0.000
7	Net interest receivable less payable	£m	3	-20.142	-37.716	-47.520
8	Profit on ordinary activities before taxation	£m	3	48.122	50.124	43.996
9	Current tax	£m	3	0.000	0.000	0.000
10	Deferred tax	£m	3	-13.531	-14.273	-31.433
11	Profit on ordinary activities after taxation	£m	3	34.591	35.851	12.563
12	Extraordinary items	£m	3	0.000	0.000	0.000
13	Profit for the year	£m	3	34.591	35.851	12.563
14	Dividends	£m	3	0.000	-34.537	-35.570
15	Retained profit for the year	£m	3	34.591	1.314	-23.007

Table 18 – HC Profit and Loss account for the year ending 31 March 2011

- 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 2010/11 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	17.401*	0.000	(3.278)	(0.113)	3.119	17.129*
Omega	24.311	(2.906)	0.000	0.000	0.000	21.405
Kinnegar	2.204	(0.238)	0.000	0.000	0.000	1.966
Total	43.916	(3.144)	(3.278)	(0.113)	3.119	40.500

* includes lease interest of £12.215m – shown in line 7 of Table 18.

- PPP elements of line 2 'Operating Costs' are £25.166m. Additionally within Line 3 'HCD' there are depreciation costs for the Alpha Project of £3.119m.
- The current tax charge is zero and this is explained as follows:

Factors affecting the tax charge for the current period

The company has adopted International Financial Reporting Standards (IFRS) 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 £31.714m is slightly higher than the charge based on the standard rate of corporation tax in the UK (28%). The differences are explained below:

Reconciliation of effective tax rate	£m
Profit for the year	80,458
Income tax expense	<u>(31,714)</u>
Profit before income tax	<u>112,172</u>
Income tax using the Company's domestic tax rate (28%)	(31,408)
Reduction in tax rate	11,237
Non deductible expenses	<u>(11,543)</u>
Under provided in prior years	<u>(31,714)</u>

The deferred tax charge in line 10 of £31.433m is based on the statutory accounts charge of £31.714m less an allocation of £0.281m deferred tax to unappointed activities.

The statutory accounts deferred tax charge of £31.714m can be shown as follows:

Deferred tax

	£m
Origination/ reversal of timing differences	(42.951)
Effect of change in tax rate	11.237
Total deferred tax charge	<u>(31.714)</u>
Tax charge on profit on ordinary activities	(31.714)

Table 19 shows a deferred tax liability on the balance sheet of £144.282m. This reconciles to the statutory accounts balance at 31 March 2011 of £145.258m after an allocation of £0.976m of the final balance to unappointed activities. The statutory balance of £145.258m can be summarised as follows:

	2011 £m	2011 £m	2011 £m
	Excluding FRS 17	FRS 17	Total
Opening liability	43.408	0.889	44.297
Prior year adjustment	70.450	0.000	70.450
Opening liability restated	113.858	0.889	114.747
Current year deferred tax charge/ (credit) to profit and loss account	42.574	0.378	42.952
Current year deferred tax charge/ (credit) to profit and loss account (effect of tax rate)	(11.174)	(0.064)	(11.238)
Current year deferred year tax charge to the Statement of Total Recognised Gains and Losses	0.000	0.408	0.408
Closing liability	<u>145.258</u>	<u>1.611</u>	<u>146.869</u>

The FRS 17 aspect of deferred tax is shown separately and rolled up into the balance shown within the pension asset on the balance sheet as follows:

	2011 £m
Benefit obligation at end of year	(107.145)
Fair value of plan assets at end of year	113.342

Surplus	6.197
Less deferred tax	<u>(1.611)</u>
Pension asset after deferred tax	<u>4.586</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-11	31-Mar-10
Discount rate	5.50%	5.75%
Rate of compensation increase	4.50%	4.75%
Rate of increase in pensions in payment	3.50%	3.75%
Rate of increase in pensions in deferment	3.50%	3.75%
Inflation	3.50%	3.75%

Weighted average assumptions used to determine net pension cost for year ended:

	31-Mar-11	31-Mar-10
Discount rate	5.75%	6.75%
Expected long-term return on plan assets	6.13%	6.04%
Rate of compensation increase	4.75%	4.50%
Rate of increase in pensions in payment	3.75%	3.50%
Inflation	3.75%	3.50%

Any changes to the assumptions from 2010 to 2011 have been advised by the independent actuaries.

There is a pension asset at 31 March 2011 of £4.586m (after deferred tax) and therefore there are currently no contributions relating to funding a deficit position. Contributions to the fund in 2010/11 were 26.9% of pensionable pay. (2009/10: 29.3% of pensionable pay from April 2009 to September 2009 and 26.9% of pensionable pay from October 2009 to March 2010).

A dividend of £36.028m was proposed, approved and paid in 2010/11 and thus there is a dividend in Table 18 for the current year.

The full dividend for 2010/11 was £36.028m with £35.570m apportioned to appointed activities and £0.458m 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	(212.643)
Add back HC amortisation of grants and contributions	(0.634)
CC amortisation of grants and contributions	3.600
CC depreciation	(132.147)
Table 20 line 2	(341.824)

Cost components in Operating Costs

The following cost components of Line 2 (£212.643m) exceed £5m in 2010-11:

Wages and Salaries	42.995m
Other pension costs	10.593m*
Electricity	33.529m
Rates	11.775m
Contractors	20.762m
Out sourced billing	6.110m
PPP Operating Charges –Omega	21.405m
Total	147.169m
	(69.2% of total Operating Costs)

Interest

Interest received and payable can be summarised as follows:

	£m	£m
Interest received		
Bank Interest	0.214	
Other finance income*	0.000	
Total Interest received		0.214
Interest Payable:		
On bonds held as security	(0.039)	
On all other loans	(35.480)	
On PPP finance lease	(12.215)	
Total Interest Payable		(47.734)
Net Interest		(47.520)

*The finance credit calculated by the actuaries on the pension fund at year end of £0.676k is included in operating costs, within other pension costs of £10.593m above, and not shown as interest received.

Capitalisation of costs

During 2010/11 £8.965m of costs were capitalised from the profit and loss account. This can be broken down as follows:

Cost	£m
Staff Costs	7.598
Materials	0.001
Labour charge	0.026
Vehicles and plant	0.001
Overheads capitalised	1.339
Total	8.965

The majority of costs capitalised relate to staff costs and overheads. These costs relate to the NIW staff who spend their time on capital projects e.g. Engineering Procurement or Asset Management staff. These costs will add to the value of the completed asset.

Comparison to prior year and PC10

A comparison to 2009/10 and to the PC10 can be shown as follows:

	Actual	Actual	PC10
	2010 -2011	2009 -2010	2010 -2011
	£m	£m	£m
Sales	345.740	347.569	357.862
Expenditure	(254.224)	(259.729)	(257.906)
Net Operating Profit	91.516	87.840	99.956
Operating Margin	26.5%	25.3%	27.9%
Interest payable	(47.520)	(37.716)	(50.691)
Deferred tax	(31.433)	(14.273)	(14.152)
Profit for the year	12.563	35.851	35.113
Net Profit Margin	3.6%	10.3%	9.8%

Explanation of variances on sales, operating profit and interest payable are outlined in the commentary to Table 20.

Systems and controls

The company uses the Oracle financial system to produce monthly and annual accounting information. The Oracle General Ledger produces a trial balance and the detailed accounts are summarised to produce the year end statutory accounts. A series of spreadsheets are then used to analyse appointed and non appointed sales and costs to produce the financial information for the Regulatory Accounts and AIR Tables.

The company is progressing a major project to develop a costing system. In terms of regulatory reporting the main tables requiring costing information are Tables 21 and 22 and the commentaries for these tables detail how an interim costing solution is being used to populate these tables until the new costing system is in place.

This new costing solution is also intended to provide better information for the allocation of costs to non appointed activities which is currently based on a set of high level costing assumptions.

Internal Controls

The company continues to place great emphasis on internal financial controls throughout the organisation. Particular work has been ongoing on revenue assurance with a cross organisational working group engaged in workshops to ensure controls across all revenue streams are examined and plans are in place to ensure that all revenue processes are mapped. Internal audit has been involved in this project and will continue to monitor progress in this area.

Prior Year Adjustment

A prior year adjustment has been reflected in the financial statements the reasons for which are outlined in Table 19.

This prior year adjustment has had the following impact on the Regulatory Accounts HC Profit and Loss Account:

HC deferred tax charge

Regulatory Accounts 2009-10	£14.273m
2009-10 comparator in 2010-11 Regulatory Accounts	£36.915m

Difference – increase in HC deferred tax charge	£ 22.642m
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This represents the element of the prior year adjustment attributable to 2009-10.

The Table 18 comparator for 2009-10 has not been amended to reflect this.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 18c REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
STATEMENT OF TOTAL RECOGNISED GAINS AND LOSSES**

DESCRIPTION				1	2	3
				2008-09	2009-10	2010-11
A	CAPITAL EXPENDITURE CATEGORIES					
1	Profit for the year	£m	3	34.591	35.851	12.563
2	Actuarial gains/losses on post employment plans	£m	3	1.666	-9.255	1.160
3	Other gains and losses	£m	3	0.000	0.000	0.000
4	Total recognised gains and losses for the year	£m	3	36.257	26.596	13.723

Table 18c – STRGL (HCA)

There are no other recognised gains or losses for the year.

The STRGL in the historic cost accounts includes a prior year adjustment of £70.450m which impacts on total reserves. However this is not included within recognised gains and losses for the year.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 18d REGULATORY ACCOUNTS (HISTORICAL COST ACCOUNTING)
ALLOCATION OF CAPITAL EXPENDITURE FOR TAX PURPOSES (TOTAL)**

DESCRIPTION				1	2	3
				2008-09	2009-10	2010-11
UNITS	DP					
A DIVIDEND ANALYSIS						
1	Dividends in respect of a financial re-organisation	£m	3	0.000	0.000	0.000
2	Other ordinary dividends	£m	3	0.000	-34.537	-35.570
3	Total dividends	£m	3	0.000	-34.537	-35.570
B INTEREST ANALYSIS						
4	Interest receivable/payable on intercompany balances	£m	3	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
6	Indexation element of index-linked bonds	£m	3	0.000	0.000	0.000
7	Preference share dividends	£m	3	0.000	0.000	0.000
8	Other interest receivable	£m	3	1.813	0.249	0.214
9	Other interest payable	£m	3	-17.899	-26.928	-35.519
10	Other finance charges - post employment costs	£m	3	0.137	0.288	0.000
11	Other finance charges	£m	3	-4.193	-11.325	-12.215
12	Total net interest	£m	3	-20.142	-37.716	-47.520

Table 18d – Analysis of dividends and interest charges

There has been no financial reorganisation during the year.

A dividend was proposed and approved in 2010/11 and this is shown on line 2. The full dividend for 2010/11 was £36.028m with £35.570m apportioned to appointed activities and £0.458m apportioned to unappointed activities (based on turnover).

Interest receivable (£0.214m) relates to monies held on deposit.

Interest payable of £35.519m is comprised of £35.480m relating to the loan notes held with DRD and £0.039m relating to interest payable on cash bonds. The interest on loan notes has increased from last year by £8.576m (31.87%) primarily due to the drawdown of £110m additional loan notes in 2010/11. 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 nil. (A finance credit relating to post employment plans has been calculated by the actuaries of the pension fund at year end. This is included in operating costs – see table 18).

During 2010/11 an amount of £12.215m (2009/10: £11.325m) 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 2010/11 budget and PC10:

	Actual	Budget	PC10
	£m	£m	£m
Net Interest payable	35.480	36.793	37.584
Loan notes	737.560	767.560	783.679

The drawdown of loans is £46.119m less than the PC10 projected for 2010/11. 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	
			2008-09	2009-10	2010-11	
A FIXED ASSETS						
1	Tangible fixed assets	£m	3	1435.239	1619.770	1713.802
2	Investment - loan to group company	£m	3	0.000	0.000	0.000
3	Investment - other	£m	3	0.106	0.106	0.106
4	Total fixed assets	£m	3	1435.345	1619.876	1713.908
B CURRENT ASSETS						
5	Stocks	£m	3	1.896	1.864	1.863
6	Debtors	£m	3	29.706	40.885	28.797
7	Cash	£m	3	3.554	0.349	-3.272
8	Short term deposits	£m	3	19.000	10.000	15.000
9	Infrastructure renewals prepayment	£m	3	0.091	1.452	0.000
10	Total current assets	£m	3	54.247	54.550	42.388
C CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR						
11	Overdrafts	£m	3	0.000	0.000	0.000
12	Infrastructure renewals accrual	£m	3	0.000	0.000	-3.044
13	Creditors	£m	3	-131.461	-136.701	-113.610
14	Borrowings	£m	3	0.000	0.000	0.000
15	Corporation tax payable	£m	3	0.000	0.000	0.000
16	Ordinary share dividends payable	£m	3	0.000	0.000	0.000
17	Preference share dividends payable	£m	3		0.000	0.000
18	Total creditors	£m	3	-131.461	-136.701	-116.654
19	Net current assets	£m	3	-77.214	-82.151	-74.266
D CREDITORS: AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR						
20	Borrowings	£m	3	-457.560	-627.560	-737.560
21	Other creditors	£m	3	-110.808	-106.137	-102.624
22	Total creditors	£m	3	-568.368	-733.697	-840.184
E PROVISION FOR LIABILITIES AND CHARGES						
23	Deferred tax provision	£m	3	-30.653	-42.713	-144.282
24	Deferred income - grants and contributions	£m	3	-15.099	-15.730	-17.723
25	Post employment asset / (liabilities)	£m	3	5.942	2.286	4.586
26	Other provisions	£m	3	-20.638	-32.884	-19.349
F PREFERENCE SHARE CAPITAL						
27	Preference share capital	£m	3	0.000	0.000	0.000
28	Net assets employed	£m	3	729.315	714.987	622.690
G CAPITAL AND RESERVES						
29	Called up share capital	£m	3	500.000	500.000	500.000
30	Share premium	£m	3	0.000	0.000	0.000
31	Profit and loss account	£m	3	57.625	43.297	-49.000
32	Other reserves	£m	3	171.690	171.690	171.690
33	Capital and reserves	£m	3	729.315	714.987	622.690

Table 19 – HC Balance Sheet as at 31 March 2011

The balance sheet in the published regulatory accounts includes a separate analysis of unappointed activities.

There are no Group companies.

The retained loss for the year is £23.007m (post dividend).

The P&L reserves in the Balance Sheet decrease by £92.297m and this movement can be shown as follows:

Retained loss for the year	(£23.007m)
Pension scheme gain net of deferred tax	£ 1.160m
Prior year adjustment *	(£70.450m)
Movement in P&L Account	(£92.297m)

A prior year adjustment has been recognised in the current year in relation to the change in policy for accounting for deferred tax.

The company has adopted International Financial Reporting Standards (IFRS) 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). 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.

As a result of this a prior year adjustment has been recognised in the regulatory financial statements. The effect of the adjustment was an increase in the deferred tax charge and a decrease in the reported profit for the year ended 31 March 2010 of £22,642k.

*A prior year adjustment of £70.450m has been recognised in the current year in relation to the recalculation of the deferred tax charge under IFRS.

The effect of the adjustments on the Company's regulatory HC balance sheet for appointed activities at 31 March 2010 was as follows:

	As previously stated £'000	Effect £'000	As restated £'000
Deferred tax provision	(42,713)	(70,450)	(113,163)
Opening reserves	51,238	(47,808)	3,430
Total recognised gains and losses for the year	(7,941)	(22,642)	(30,583)
	43,297	(70,450)	(27,153)

As shown the effect of the adjustment was a decrease in Profit and Loss reserves at 1 April 2009 of £47.808m and an increase in the deferred tax charge and a decrease in the reported profit for the year ended 31 March 2010 of £22.642m giving a total change in reserves in 2010-11 of £70.450m.

The Balance Sheet for the year ended 31 March 2011 within the Regulatory Accounts includes the impact of this adjustment to the 2009-10 comparator year.

However within Table 19 the comparator for 2009-10 has not been amended to reflect this.

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	112.045 *	6.434	2.223	120.702
Acc. Deprec	(7.384)	-	-	(7.384)
NBV	104.661	6.434	2.223	113.318

* Includes the original capital value of Alpha PPP (£111.708m) 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	3.593	-	-	-	3.593
Accruals	1.472	10.482	1.696	0.052	13.702
Total	5.065	10.482	1.696	0.052	17.295

Line 21 - Other creditors falling due after more than one year

	Alpha
	£m
Lease obligation due > 1 yr	101.247

Line 26 - Other provisions

	Omega
	£m
Provisions	14.172

Significant features and movements

Fixed Assets

Increased broadly in line with additions of approximately £211m in year.

Debtors

Decreased by £12.088m from £40.885m to £28.797m (29.6%). This is primarily due to:

- measured debtors decrease by £2.7m
- Accrued income from measured customers reduced by £7.4m.
- rechargeable debtors decreased by £0.7m in 2010-11
- reduction of the debtor balance of £1m that arose in connection with the PPP Alpha contract;
- a increase in VAT receiveable debtors of £0.5m.
- EU grant debtor of £1.482m discharged (along with corresponding EU grant creditor of £1.482m)
- bad debt provision increased by £1.1m.
- DRD subsidy debtor increased by £1.1m.

Cash and Short term deposits

Cash has decreased by £3.621m from £0.349m to (£3.272m) (1037.5%) and Short term deposits have increased by £5m from £10m to £15m (50.0%).

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	£174m
Net Interest paid	£ 47m
Dividend paid	£ 36m
PPP Lease payments	£ 3m
Total	£260m

Funded by:

Generated from operations	£151m
Loans	£110m
Reduction of cash	£ 4m
Increase in deposit monies	(£ 5m)
Total	£ 260m

Deferred tax

The deferred tax balance has increased from £42.713m to £144.282m. An explanation for this has been included in the commentary to Table 18.

Borrowings > 1 year

Borrowings have increased by £110m from £627.56m to £737.56m. The additions to capital expenditure during the year were £211m. The increase in

borrowings were used to partly fund these additions to capital expenditure with the balance of capital being financed through working capital.

Post employment asset/(liabilities)

Increased from £2.286m to £4.586m (100.6%).

This can be shown as follows:

	£m
Opening balance at 1.4.10	2.286
Current Service Costs	(11.269)
Past Service Costs	(1.073)
Contributions	13.120
Finance Credit	0.676
Actuarial Gain	1.568
Increase in Deferred tax on asset	(0.722)
Closing balance 31.3.11	4.586

Other provisions

Decreased from £32.884m to £19.349m (41.2%).

This decrease of £13.535m can be summarised as follows:

Decrease in Public and Employer Liability claims	(0.4m)
Decrease in Contractor claims	(13.7m)
Other	0.6m
Total	13.5m

PPP – Infrastructure renewals charge (IRC) and expenditure (IRE) – Capital Maintenance

The table below summarises the IRC, IRE and capital maintenance during 2010/11 in relation to the PPP projects:

	Alpha	Omega	Kinnegar	Total
	£m	£m	£m	£m
IRE	-	-	-	-
IRC	-	-	-	-
Capital maintenance	0.113	-	-	0.113

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 2010-11 this is confirmed by the operator to be £113k. 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 2010-11 (2009-10: nil). There has therefore been no apportionment of IRC in 2009-10 (2009-10: nil).

Omega and Kinnegar

Both Omega and Kinnegar are treated as 'off balance sheet' and the additions in year relate to the residual interest asset with no related IRE, IRC or capital maintenance aspects.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 19a ANALYSIS OF BORROWINGS DUE AFTER MORE THAN ONE YEAR (HISTORICAL COST ACCOUNTING)
BALANCE SHEET AS AT 31 MARCH

	1	2	3	4	5	6	7	8	9
	DESCRIPTION	YEARS TO MATURITY	PRINCIPAL SUM £m 3dp	Years to maturity x principle sum	REAL COUPON %	NOMINAL INTEREST RATE %	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	16	737.560	11800.960	-0.10%	5.25%	38.722	38.722	737.560
+									
350									
C2	Floating rate instruments								
351									
+									
400									
C3	Index linked instruments								
401									
+									
450									
	TOTAL FOR OTHER BORROWINGS		737.560	11800.960			38.722	38.722	737.560
D	TOTALS		737.560	11800.960			38.722	38.722	737.560
E	RPI assumption		5.35%						
F	ANALYSIS								
F	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 del								0%
G2	Fixed rate debt as percentage of total del								100%
G3	Index linked debt as percentage of total del								0%
G4	Fixed rate debt and index linked debt as percentage of total del								100%
G5	Weighted average years to maturity			16					

Table 19a – Analysis of Borrowings due after more than One Year

At 31 March 2011 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 31 March 2011 the gilt reference rate was 4.2042% (31 March 2010: 4.4103%) equating to an equivalent borrowing rate of 5.0542% (31 March 2010: 5.2603%).

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 2010/11 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 5.21%.

In 2010/11 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 2011.

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 2010 (TOTAL)**

DESCRIPTION		UNITS	DP	1	2	3
				2008-09	2009-10	2010-11
1	Turnover	£m	3	327.395	347.569	345.740
2	Current cost operating costs (including CCD & IRC)	£m	3	-315.427	-328.924	-341.824
3	Operating income	£m	3	-0.050	0.005	0.079
4	Working capital adjustment	£m	3	-0.292	4.313	4.898
5	Current cost operating profit	£m	3	11.626	22.963	8.893
6	Other income	£m	3	0.000	0.000	0.000
7	Net interest receivable less payable	£m	3	-20.142	-37.716	-47.520
8	Financing adjustment	£m	3	-1.044	25.217	40.427
9	Current cost profit before taxation	£m	3	-9.560	10.464	1.800
10	Current tax	£m	3	0.000	0.000	0.000
11	Deferred tax	£m	3	-13.531	-14.273	-31.433
12	Current cost profit on ordinary activities	£m	3	-23.091	-3.809	-29.633
13	Extraordinary items	£m	3	0.000	0.000	0.000
14	Current cost profit attributable to shareholders	£m	3	-23.091	-3.809	-29.633
15	Dividends	£m	3	0.000	-34.537	-35.570
16	Current cost profit retained	£m	3	-23.091	-38.346	-65.203

Table 20 – CC Profit and Loss account for year ending 31 March 2011

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	17.401*	0.000	(3.278)	(0.113)	3.431	17.441*
Omega	24.311	(2.906)	0.000	0.000	0.000	21.405
Kinnegar	2.204	(0.238)	0.000	0.000	0.000	1.966
Total	43.916	(3.144)	(3.278)	(0.113)	3.431	40.812

* includes lease interest of £12.215m.

Line 7 Net interest receivable less payable includes £12.215m interest payable on Alpha PPP finance lease.

Comparison with prior year results

	2010-2011	2009-2010	Variance
	£m	£m	%
Turnover	345.740	347.569	(0.5)%
CC Operating profit	8.893	22.963	(61.3)%
CC (loss) / profit attributable to shareholders	(29.633)	(3.809)	(678.0)%
Dividends	(35.570)	(34.537)	3.0%
CC loss retained	(65.203)	(38.346)	(70.0)%

Sales have decreased in 2011 by £1.829m (0.5%) due to:

- Increase in unmeasured household income £6.246m
- Decrease in unmeasured non-household income (£1.651m)
- Decrease in non-household income (£8.779m)
- Increase in trade effluent income £0.777m
- Increase in road drainage income £0.197m
- Increase in large user income £1.100m
- Increase in other income £0.281m
- Total decrease £1.829m**

(see Table 23 for detail on water and sewerage income changes)

However operating costs have risen by £12.9m (3.9%) over the same period and this has subsequently lowered the CC operating profit margin from 6.6% to 2.6%. Although the overall focus on cost reduction throughout the business has continued during 2010-11 a significant rise in CCD of £35.9m (from £96.2m to £132.1m) has led to a fall in the operating margin. The impact of the increase in CCD on margins is evidenced by lower proportionate rises in expenditure before CCD compared to the increase in turnover. Some of the main changes in operating costs in 2011 include:

- Power costs have fallen by £3m (8.2%).
- Hired and contracted costs have fallen by £6.2m (23.5%).
- PPP unitary charges up by £8.5m (51.2%)
- CCD up £35.9m (37.3%).
- IRC fallen by £7.6m (20.6%).

The profit attributable to shareholders has decreased by approximately £25.8m due mostly to:

- Sales down by £1.8m with operating costs up £12.9m.
- Financing adjustments increase by £15.2m (credit).
- Net interest payable up by £9.8m.
- Deferred tax up by £17.2m.

There was a dividend declared and approved for 2009/10 of £36.028m (accounted for in 2010-11) with £35.570m attributed to appointed activities.

Cost components in Operating Costs

The following cost components of Line 2 (£m) exceed £5m in 2010-11:

Wages and Salaries	42.995m
Other pension costs	10.593m
Electricity	33.529m
Rates	11.775m
Contractors	20.762m
Out sourced billing	6.110m
PPP Operating Charges –Omega	21.405m
IRC	29.393m
Current cost depreciation	132.147m
Total	308.709m
	(90.3% of total Operating Costs)

Voluntary Early Retirement and Pension

The VER schemes in 2007/08, 2008/09, 2009/10 and 2010/11 can be summarised as follows:

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 2010/11 are as follows:

Dr 5140 Retirement movement in provision	£0.136m
Cr 2313 Accruals	£0.136m

(ignoring any opening accrual from 2009/10).

NIW Pension Fund

The Options exercise was completed in February 2009 and 25% by headcount (20% as a percentage of liabilities) of Water Service PCSPS(NI) members opted to transfer their accrued benefits to the NIW Pension Scheme.

The Statutory Accounts at 31 March 2011 (Note 20) and 31 March 2010 Note 25 show a full disclosure of the impact of the options exercise on the NIW pension fund. An extract of this is shown below:

Movements in fair value of plan assets

	Total year to 31 March 2011	Scheme year to 31 March 2010	Estimated bulk transfer year to 31 March 2010	Total year to 31 March 2010
	£000			£000
At the beginning of the year	97,289	23,478	44,117	67,595
<i>Movement in year</i>				
Expected return on assets	6,351	1,860	2,647	4,507
Contributions by plan participants	796	818	-	818
Contributions by employer	13,120	18,491	-	18,491
Actuarial gain/(loss)	1,501	6,042	2,742	8,784
Benefits paid	(2,797)	(2,270)	-	(2,270)
Settlement in relation to the Alpha bulk transfer	-	(57)	-	(57)
Settlement in relation to the admission of Northgate as a participating employer	-	(579)	-	(579)
Experience adjustment following receipt of bulk transfer	(2,917)	-	-	-
	113,343	47,783	49,506	97,289

Movement in present value of defined benefit obligations

	Total year to 31 March 2011 £000	Scheme year to 31 March 2010 £000	Estimated bulk transfer year to 31 March 2010 £000	Total year to 31 March 2010 £000
At the beginning of the year	94,114	23,919	35,425	59,344
<i>Movement in year</i>				
Current service cost	11,269	7,773	-	7,773
Interest on scheme liabilities	5,675	1,844	2,375	4,219
Past service costs	1,073	3,207	-	3,207
Actuarial (gain)/loss	(68)	9,685	11,955	21,640
Contributions by plan participants	796	818	-	818
Benefits paid	(2,797)	(1,791)	(479)	(2,270)
Settlement in relation to the Alpha bulk transfer	-	(57)	-	(57)
Settlement in relation to the admission of Northgate as participating employer	-	(208)	(352)	(560)
Experience adjustment following receipt of bulk transfer	(2,917)	-	-	-
	107,145	45,190	48,924	94,114

Scheme assets and liabilities

	Total at 31 March 2011 £000	Scheme at 31 March 2010 £000	Estimated bulk transfer at 31 March 2010 £000	Total at 31 March 2010 £000
Equities	52,410	20,900	-	20,900
Corporate bonds	21,301	9,164	-	9,164
Gilts	34,581	16,182	-	16,182
Other	5,050	1,537	-	1,537
Bulk transfer	N/A	-	49,506	49,506
Total market value of assets	113,342	47,783	49,506	97,289
Actuarial value of liabilities	(107,145)	(45,190)	(48,925)	(94,115)
Surplus/ (deficit) in the scheme - pension asset / (liability)	6,197	2,593	581	3,174
Related deferred tax asset / (liability)	(1,611)	(726)	(162)	(888)
Net pension asset / (liability)	4,586	1,867	419	2,286

The year end pension asset as shown above before deferred tax is £6.197m.

There have been no pension costs directly allocated to non appointed costs as the information is currently not available to separate these costs from the appointed costs. However the operating costs attributed to non appointed activities would include an apportionment of pension costs.

Business Improvement costs

Business improvement costs are not analysed through the Oracle financial system but are separately identified at month end for reporting purposes only. These costs are included within line 2 – current cost operating costs and can be summarised as follows:

	£m
Salaries	1.043
Other staff costs	0.126
Hired and contracted	0.783
Materials and equipment	(0.003)
Other costs of employment	0.007
Other expenses	0.014
Total	1.970

Reprofiling of costs may occur during the year as part of the quarterly reforecasting process.

Capitalisation of costs

During 2010/11 £8.965m of costs were capitalised from the profit and loss account. This can be broken down as follows:

Cost	£m
Staff Costs	7.598
Materials	0.001
Labour charge	0.026
Vehicles and plant	0.001
Overheads capitalised	1.339
Total	8.965

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.

Prior Year Adjustment

A prior year adjustment has been reflected in the regulatory financial statements the reasons for which are outlined in Table 19.

This prior year adjustment has had the following impact on the Regulatory Accounts CC Profit and Loss Account:

CC deferred tax charge

Regulatory Accounts 2009-10	£14.273m
2009-10 comparator in 2010-11 Regulatory Accounts	£36.915m

Difference – increase in CC deferred tax charge	£ 22.642m
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This represents the element of the prior year adjustment attributable to 2009-10.

The Table 20 comparator for 2009-10 has not been amended to reflect this.

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	3,714	11,184	14,898
2	Power	£m	3	5,832	4,053	9,885
3	Agencies	£m	3	0,000	0,000	0,000
4	Hired and contracted services	£m	3	2,528	7,659	10,187
5	Associated companies	£m	3	0,000	0,000	0,000
6	Materials and consumables	£m	3	3,666	0,769	4,435
7	Service charges	£m	3	0,000	0,000	0,000
8	Bulk supply imports	£m	3	0,000	0,000	0,000
9	Other direct costs	£m	3	0,004	0,016	0,021
10	Total direct costs	£m	3	15,745	23,680	39,425
11	General and support expenditure	£m	3	12,399	13,607	26,007
12	Functional expenditure	£m	3	28,144	37,288	65,432
B OPERATING EXPENDITURE						
13	Customer services	£m	3			3,619
14	Scientific services	£m	3			1,555
15	Other business activities	£m	3			1,396
16	Total business activities	£m	3			6,571
17	Rates	£m	3			3,881
18	Doubtful debts	£m	3			1,955
19	Exceptional items	£m	3			0,000
20	Total opex less third party services	£m	3			77,839
21	Third party services - opex	£m	3			0,148
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	10,149	10,149
24	Reactive and planned maintenance non-infrastructure	£m	3	1,132	6,037	7,168
D CAPITAL MAINTENANCE						
25	Infrastructure renewals charge (excluding third party services)	£m	3	19,017	0,000	19,017
26	Current cost depreciation (allocated)	£m	3	20,138	21,384	41,522
27	Amortisation of deferred credits	£m	3			-1,464
28	Amortisation of intangible assets	£m	3			0,000
29	Business activities current cost depreciation (non-allocated)	£m	3			0,091
30	Capital maintenance excluding third party services	£m	3			59,166
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			59,166
34	Total operating costs	£m	3			137,153

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	2	3	
			WATER & TREATMENT	WATER DISTRIBUTION	WATER SERVICE TOTAL	
SERVICE ANALYSIS - WATER						
A	DIRECT COSTS					
1	Employment costs	£m	3			
2	Power	£m	3	6.275	0.000	6.275
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	Bulk supply imports	£m	3			
9	Other direct costs	£m	3	0.000	0.000	0.000
10	Total direct costs	£m	3	6.275	0.000	6.275
11	General and support expenditure (NIW Only)	£m	3	0.164	0.000	0.164
12	Functional expenditure	£m	3	6.439	0.000	6.439
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			2.722
18	Doubtful debts	£m	3			
19	Exceptional items	£m	3			
20	Total opex less third party services	£m	3			9.161
21	Third party services - opex	£m	3			
21a	PPP Unitary Charges (Opex element)	£m	3			
22	Total operating expenditure	£m	3			
22a	Payment by concessionaire to operator	£m	3			
C	REACTIVE AND PLANNED MAINTENANCE (INCLUDING OPEX)					
23	Reactive and planned maintenance infrastructure	£m	3	0.000	0.000	0.000
24	Reactive and planned maintenance non-infrastructure	£m	3	0.000	0.000	0.000
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	3.431	0.000	3.431
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			3.431
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			3.431
34	Total operating costs	£m	3			14.387

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	2	3	
			WATER RESOURCES & TREATMENT	WATER DISTRIBUTION	WATER SERVICE TOTAL	
SERVICE ANALYSIS - WATER						
A	DIRECT COSTS					
1	Employment costs	£m	3	3,714	11,184	14,898
2	Power	£m	3	12,107	4,053	16,160
3	Agencies	£m	3	0,000	0,000	0,000
4	Hired and contracted services	£m	3	2,528	7,659	10,187
5	Associated companies	£m	3	0,000	0,000	0,000
6	Materials and consumables	£m	3	3,666	0,769	4,435
7	Service charges	£m	3	0,000	0,000	0,000
8	Bulk supply imports	£m	3	0,000	0,000	0,000
9	Other direct costs	£m	3	0,004	0,016	0,020
10	Total direct costs	£m	3	22,019	23,681	45,700
11	General and support expenditure	£m	3	12,563	13,607	26,170
12	Functional expenditure	£m	3	34,583	37,288	71,870
B	OPERATING EXPENDITURE					
13	Customer services	£m	3			3,619
14	Scientific services	£m	3			1,555
15	Other business activities	£m	3			1,396
16	Total business activities	£m	3			6,570
17	Rates	£m	3			6,603
18	Doubtful debts	£m	3			1,955
19	Exceptional items	£m	3			0,000
20	Total opex less third party services	£m	3			86,998
21	Third party services - opex	£m	3			0,150
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	10,149	10,149
24	Reactive and planned maintenance non-infrastructure	£m	3	1,132	6,037	7,168
D	CAPITAL MAINTENANCE					
25	Infrastructure renewals charge (excluding third party services)	£m	3	19,017	0,000	19,017
26	Current cost depreciation (allocated)	£m	3	23,569	21,384	44,953
60	Amortisation of deferred credits	£m	3			-1,464
60	Amortisation of intangible assets	£m	3			0,000
29	Business activities current cost depreciation (non-allocated)	£m	3			0,091
30	Capital maintenance excluding third party services	£m	3			62,597
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			62,597
34	Total operating costs	£m	3			151,540

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	3,639	5,483	0,696	9,818
2 Power	£m	3	4,817	7,837	1,420	14,074
3 Agencies	£m	3	0,000	0,000	0,000	0,000
4 Hired and contracted services	£m	3	7,185	0,730	2,179	10,094
5 Associated companies	£m	3	0,000	0,000	0,000	0,000
6 Materials and consumables	£m	3	0,151	0,703	0,254	1,108
7 Service charges	£m	3	0,000	0,000	0,000	0,000
8 Other direct costs	£m	3	0,017	0,004	0,001	0,022
9 Total direct costs	£m	3	15,809	14,757	4,550	35,116
10 General and support expenditure	£m	3	8,629	8,878	3,466	20,973
11 Functional expenditure	£m	3	24,438	23,635	8,016	56,089
B OPERATING EXPENDITURE						
12 Customer services	£m	3				3,048
13 Scientific services	£m	3				1,245
14 Other business activities	£m	3				1,176
15 Total business activities	£m	3				5,469
16 Rates	£m	3				4,244
17 Doubtful debts	£m	3				0,907
18 Exceptional items	£m	3				0,000
19 Total opex less third party services	£m	3				66,709
20 Third party services - opex	£m	3				0,000
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	5,258	0,000	0,000	5,258
23 Reactive and planned maintenance non-infrastructure	£m	3	10,354	4,890	0,000	15,244
D CAPITAL MAINTENANCE						
24 Infrastructure renewals charge (excluding third party services)	£m	3	10,376		0,000	10,376
25 Current cost depreciation (allocated)	£m	3	2,292	80,802	3,845	86,939
26 Amortisation of deferred credits	£m	3				-2,136
27 Amortisation of intangible assets	£m	3				0,000
28 Business activities current cost depreciation (non-allocated)	£m	3				0,164
29 Capital maintenance excluding third party services	£m	3				95,343
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				95,343
33 Total operating costs	£m	3				162,053

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		1.855	1.807	3.662
3 Agencies	£m	3				
4 Hired and contracted services	£m	3				
5 Associated companies	£m	3				
6 Materials and consumables	£m	3				
7 Service charges	£m	3				
8 Other direct costs	£m	3				0.000
9 Total direct costs	£m	3	0.000	1.855	1.807	3.662
10 General and support expenditure (NIW Only)	£m	3		0.159	0.047	0.206
11 Functional expenditure	£m	3	0.000	2.014	1.854	3.868
B OPERATING EXPENDITURE						
12 Customer services	£m	3				
13 Scientific services	£m	3				0.064
14 Other business activities	£m	3				
15 Total business activities	£m	3				0.064
16 Rates	£m	3				0.928
17 Doubtful debts	£m	3				
18 Exceptional items	£m	3				
19 Total opex less third party services	£m	3				4.860
20 Third party services - opex	£m	3				
20a PPP Unitary Charges (Opex element)	£m	3				
21 Total operating expenditure	£m	3				
21a Payment by concessionaire to operator	£m	3				
C REACTIVE AND PLANNED MAINTENANCE (INCLUDING OPEX)						
22 Reactive and planned maintenance infrastructure	£m	3	0.000	0.000	0.000	0.000
23 Reactive and planned maintenance non-infrastructure	£m	3	0.000	0.000	0.000	0.000
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				28.231

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	3.639	5.483	0.696	9.818
2 Power	£m	3	4.817	9.692	3.227	17.736
3 Agencies	£m	3	0.000	0.000	0.000	0.000
4 Hired and contracted services	£m	3	7.185	0.730	2.179	10.094
5 Associated companies	£m	3	0.000	0.000	0.000	0.000
6 Materials and consumables	£m	3	0.151	0.703	0.254	1.108
7 Service charges	£m	3	0.000	0.000	0.000	0.000
8 Other direct costs	£m	3	0.017	0.004	0.001	0.022
9 Total direct costs	£m	3	15.809	16.612	6.357	38.778
10 General and support expenditure	£m	3	8.629	9.037	3.513	21.179
11 Functional expenditure	£m	3	24.438	25.649	9.870	59.957
B OPERATING EXPENDITURE						
12 Customer services	£m	3				3.048
13 Scientific services	£m	3				1.309
14 Other business activities	£m	3				1.176
15 Total business activities	£m	3				5.533
16 Rates	£m	3				5.172
17 Doubtful debts	£m	3				0.907
18 Exceptional items	£m	3				0.000
19 Total opex less third party services	£m	3				71.569
20 Third party services - opex	£m	3				0.000
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	5.258	0.000	0.000	5.258
23 Reactive and planned maintenance non-infrastructure	£m	3	10.354	4.890	0.000	15.244
D CAPITAL MAINTENANCE						
24 Infrastructure renewals charge (excluding third party services)	£m	3	10.376		0.000	10.376
25 Current cost depreciation (allocated)	£m	3	2.292	80.802	3.845	86.939
26 Amortisation of deferred credits	£m	3				-2.136
27 Amortisation of intangible assets	£m	3				0.000
28 Business activities current cost depreciation (non-allocated)	£m	3				0.164
29 Capital maintenance excluding third party services	£m	3				95.343
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				95.343
33 Total operating costs	£m	3				190.284

Tables 21 & 22 Activity Costing Analysis – Water & Sewerage Service

The costs in Tables 21 & 22 are populated with the updated information available at 6 May 2011 for the year ended 31 March 2011.

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 AIR11. 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 (compromising 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 4 separate ‘Overhead Pots’ and are apportioned either on the basis of the directly coded spend or on the basis of the total direct costs. The quantum of the apportionment of the general Overhead Pots has not changed significantly from AIR10 to AIR11. 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	26.1%	28.0%	18.7%	19.7%	7.5%	Non ops general spend. Excludes CS, SS & Regulation
G&S Overhead Pot 2a - Water	48.2%	51.8%	0.0%	0.0%	0.0%	Water related activities only
G&S Overhead Pot 2b - Sewerage	0.0%	0.0%	40.8%	42.8%	16.4%	Sewerage activities only
G&S Overhead Pot 3	26.1%	28.0%	18.7%	19.7%	7.5%	Water and sewerage networks spend only

The percentage splits in AIR11 allocate more costs to Water and less cost to Sewerage than AIR10. The allocation to Water from General & Support Overhead Pot 1, which contains the vast majority of the cost, has increased from 43.3% in AIR10 to 54.1% in AIR11. This is due to the relative increase of direct costs in Water as a percentage of total costs. This is primarily driven by the transfer of the Incinerator to PPP, reducing Sewerage costs and the impact of the freeze/thaw increasing Water costs.

Further explanation is detailed later in the commentary.

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 the allocation to Water has increased from 44.2% in AIR10 to 54.3% in AIR11.

The table below shows the basis of apportionment for AIR11.

Apportionment of business activities	Water		Sewerage		
	R&T	Distribution	Sewerage	Sewage Treatment	Sludge Treatment & Disp
BASIS - Total spend (Includes general & Support)	26.1%	28.2%	18.6%	19.5%	7.5%
Apportionment					
Water / Sewerage split	54.3%		45.7%		

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 AIR11 overall rates are split 56% Water and 44% Sewerage compared to 48% and 52% respectively in AIR10. This change is primarily due to significant refunds applied to wastewater sites during the year.

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:

2010/11 Freeze thaw incident

During December 2010 and January 2011 the prolonged adverse weather conditions resulted in a major incident for NI Water. The additional operating expenditure incurred amounted to approximately £5.1M, with circa 50% in Hired & Contracted Services and the majority of the remaining 50% in Employment Costs and Other Direct Costs. There was a similar incident in 2009/10 but on a much smaller scale (£0.5M).

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	£2.0M	General & Support – all activities
Voluntary Early Retirement Scheme \ Voluntary Severance (VER \ VS)	£2.6M	Employment Costs and General & Support – all activities
Total	£4.6M	

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.

The Programme in 2010/11 focussed mainly on Data Quality, and essentially the attempt to secure a release from the Legal Undertakings. Total expenditure on the Programme in 2010/11 was £2.0M, compared to £6.4M in 2009/10. Expenditure has decreased, as 2009/10 was the final year of the One Programme, which involved considerable expenditure on the PC10 project, Customer Services and Mobile Work Management.

Voluntary Early Retirement

During 2010/11 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 are contained within the Annual Report.

The cost of £2.6M can be broken down as follows:

Description	Amount
Pension related VER past service costs	£1.1M
Non pension lump sum	£0.1M
VS scheme payments	£1.4M
Total	£2.6M

Of the above costs relating to the 2010/11 scheme, the only payment made during the year was less than £0.1M. 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 AIR10 was £5.1M.

In line with the AIR10 recommendation the VER costs for Water Resource & Treatment, Water Distribution, Sewerage, Sewage Treatment and Sludge Treatment & Disposal have been directly included in line 1, Employment costs.

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 £53M as detailed below. These costs include the £2.6M VER\VS costs outlined above. Only circa £25M is included in Employment Costs (Line 1) in Tables 21 & 22 (AIR10 circa £23M). The table below provides the reconciliation between these amounts:

Description	Amount	Table 21/22 location
Industrial Wages	£20.0M	
Salaries	£28.1M	
Temporary Staff	£0.8M	
Other Costs of Employment	£3.0M	
Staff Expenses	£1.2M	
Total NI Water staff costs	£53.1M	
Less:		
Customer Services	(£3.3M)	Customer Services
Scientific Services	(£1.5M)	Scientific Services
Third Party Opex	(£0.1M)	Third Party Opex
Regulation	(£0.6M)	Other Business Activities
Unallocated	(£22.9M)	General & Support
Total Employment Costs	£24.7M	£14.9M Table 21 and £9.8M Table 22

The unallocated amount of circa £23M is included in General & Support and has been apportioned between Table 21 and 22, across each of the columns, based on total direct costs. Employment costs have increased by approximately £1.6M from AIR10 due to the insourcing of positions and the introduction of the Cost-to-Serve project which now treats expense line 616x Vehicle and Plant Charges under 611x Cost Reallocations and is therefore mapped to Employment Costs. Vehicle and Plant Charges were previously treated as Line 9, Other Direct Costs. The main expenditure in temporary support staff in the 10/11 financial year was in the Operations Directorate (£0.5M).

Hired & Contracted

Hired and Contracted Services of circa £20M in Table 21 and Table 22 are split out in the table below. The corresponding charge in the AIR10 was circa £27M.

Hired & Contracted Services:	Table 21	Table 22	TOTAL
Operational Contractors	£9.5M	£9.6M	£19.1M
Other Contractors	£0.7M	£0.5M	£1.2M
Consultants	£0.0M	£0.0M	£0.0M
TOTAL	£10.2M	£10.1M	£20.3M

Within the Operational Contractors costs of £9.5M 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 £9.6M in Table 22, circa £2M is for the cost of the various Sludge Disposal Routes, circa £7M 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 are no Consultants Fees in Hired and Contracted in Tables 21 and 22.

Hired and Contracted Services have decreased by £6.2M from AIR10. The main area of decrease is in Sludge Treatment and Disposal which has reduced by circa £8M from AIR10 due to the Incinerator being operated by PPP in 2010/11. Sewage Treatment has reduced by circa £1M from AIR10

due to the full year operation of the PPP sites. These reductions are offset by the increase of circa £2M in Water Distribution driven by the increase cost of the Freeze Thaw in 2010/11 and the change in treatment of leakage repairs in the PC10 Final Determination where 90% of the repairs were to be treated as Opex.

General & Support Costs

General & Support costs are similar between AIR11 (£47.4M) and AIR10 (£46.6M).

The principal costs in this expenditure line are:

Description	Amount	Table 21/22 location
Unallocated Employment Costs	£22.9M	Included in General & Support (Removed from Employment Costs)
Unallocated Power	£0.0M	Included in General & Support (Removed from Power Costs)
Unallocated Hired & Contracted Costs	£10.5M	Included in General & Support (Removed from Hired & Contracted)
Unallocated Materials & Consumables	£1.6M	Included in General & Support (Removed from Materials & Consumables)
Unallocated Other Direct Costs	£7.0M	Included in General & Support (Removed from Other Direct Costs)
Communication	£1.0M	General & Support
Mobile V&P Charges & Repairs	£2.3M	General & Support
Audit & Environmental Regulatory Costs	£1.8M	General & Support
Other	£0.3M	General & Support
Total	£47.4M	£26.2M Table 21 and £21.2M Table 22

General & Support costs were apportioned across Table 21 & Table 22 based on the total direct costs allocated to each column. Service Activities are mapped to the NIAUR service areas in **Appendix 2**. This was consistently applied to both AIR10 and AIR11. See the **Allocation of costs between service areas** section at the start of the commentary.

In line with the AIR10 recommendation areas of General and Support expenditure had been agreed with the Regulator during the AIR 10 process. NI Water has further reviewed the costs allocated to General & Support in line with the guidelines. As part of ongoing improvements this will be reviewed again during 2011/12. The implementation of the Cost-to-Serve project will also further facilitate the allocation of General & Support costs.

Table 21 – NI Water Total

A - Direct Costs

Table 21 Total Functional Expenditure has increased by over £9M from AIR10 to AIR11. This is primarily due to the increases in the allocation of General & Support expenditure (£6.9M) and the increase in Hired and Contracted Services of (£2.8M) but is explained on a line by line basis below;

- Line 1: Employment costs have increased in Water Resources & Treatment (WRT) by circa £0.5M and in Water Distribution (WD) by circa £0.7M. The increase in costs are due to the internal charges for Operations being rolled into one expense line, where in AIR10 616X Vehicle and Plant charges were included in line 9 'Other Direct Costs'. With the introduction of the Cost-to-Serve project these costs are now included within expense line 611X Cost Reallocations. As per the AIR10 recommendation the VER costs for WRT and WD have been directly included in line 1.
- Line 2: Power costs include electricity costs and fuel costs for power generation. The costs have decreased by circa £1.0M in AIR11 primarily due to the cessation of NIW's fixed price contract with ESB for the supply of electricity. The contract ended on 30 September 2010. Power costs include £6.3M related to PPP.
- Line 3: Agencies – there are no costs in this line.
- Line 4: Hired and Contracted Services have increased by circa £2.8M, split £0.6M increase in WRT and £2.2M increase in WD. This is primarily due to the costs for the Freeze Thaw incident, and the inclusion of the costs of Leakage Repairs in line with the PC10 Final Determination which were previously treated as capital.
- Line 5: Associated companies– there are no costs in this line.
- Line 6: Materials & Consumables have reduced by circa £0.4M from AIR10.
- Line 7: Service Charges– there are no costs in this line.
- Line 8: Bulk Supply imports – there are no costs in this line.
- Line 9: Other Direct Costs have decreased by circa £0.3M. As mentioned in line 1 above in AIR10 616X Vehicle and Plant charges were included in line 9, Other Direct Costs, however with the introduction of the Cost-to-Serve project these costs are now included within expense line 611X Cost Reallocations in line 1, Employment Costs.
- Line 10: Total Direct Costs – this is a calculated line and is the total of Line 1-9. AIR11 direct costs are £2.3M higher than AIR10. This is driven by Hired and Contracted Services as detailed above.
- Line 11: At a total NI Water level, being the totals of Tables 21 and 22 together, General & Support expenditure has remained constant. However the allocation of those costs have changed significantly in line with the relative changes in direct costs. In Table 21, these have increased by over £6.9M from AIR10, £4.6M in WRT and £2.3M in WD. The reason for the increase in the costs in Table 21 is the increase in the percentages used to allocate General & Support costs. The

percentages used are calculated on the total of Direct Costs and in AIR11 the total of the Direct Costs of Table 22 have greatly reduced resulting in an increase for Table 21 from 43.3% in AIR10 to 54.1% in AIR11. 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 £0.2M for PPP.

- Line 12: This is the calculated total line for functional expenditure which has increased by over £9M mainly due to the £6.9M increase in General & Support expenditure and £2.8M increase in Hired and Contracted Services. Line 12 includes £6.4M of costs associated with PPP.

B - Operating Expenditure

- Line 13: Customer Services costs have decreased by circa £4.6M compared to AIR10. This is primarily due to the AIR10 costs including costs set aside for a commercial claim being made against NI Water. In addition, consultancy costs have decreased, due to reduced project work. Customer Services costs are apportioned based on the percentage of direct costs from Table 21 & 22. In AIR11 the percentage split was calculated at 54.3% Table 21 and 45.7% Table 22. In AIR10 the percentage split was 44.2% and 55.8% between Table 21 & 22 respectively.
- Line 14: Scientific Services costs have increased marginally from AIR10. At a total NI Water level, being the totals of Tables 21 and 22, the costs are consistent with the AIR10 but the allocation for Table 21 has changed from 44.2% in AIR10 to 54.3% and AIR11. Scientific Services costs have been split using the same percentage as Customer Services as detailed above in line 13.
- Line 15: Other Business Activities – Regulatory costs have slightly increased from AIR10. 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 AIR10 of circa £4.2M is driven by the reduction in Customer Services costs as detailed above.
- Line 17: Local authority rates have decreased marginally in AIR11 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 which is consistent with AIR10. Rates include £2.7M relating to PPP sites.
- Line 18: Doubtful debts have increased from the AIR10 position of £0.6M to £2.0M in AIR11. The increase is due to legacy debt (pre Apr 2007) write offs of £0.6M in 2010/11 and a more prudent provision for certain customer sectors (e.g. hospitality, construction) given the current general economic conditions.

These costs have been split between Table 21 and 22 on a specific line by line basis, and results in a percentage split of 68% and 32% respectively. This compares to 58% and 42% respectively in AIR10 which was split primarily on the pro-rated income split.

- Line 19: Exceptional items– there are no costs in this line.
 - Line 20: Total opex less third party services – this is a calculated line and is the total of line 12,16,17,18 and 19. This has increased by circa £6M from AIR10 driven by the increase in General and Support expenditure.
 - Line 21: Third party services have reduced marginally.
 - Line 21a: Total PPP Unitary Charge has increased by circa [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 increased by around £6M from AIR10 mainly due to the increase in the General & Support expenditure (see line11). This agrees to Table 35 line 24.
Total operating expenditure includes circa £11M relating to PPP.
- Line 22a: This figure has increased marginally from AIR10 and varies from year to year depending upon volumes of water dispatched, changes in the volumetric charge, deductions incurred and indexation. See Table 42 commentary for details.

C Reactive & Planned Maintenance

- Line 23: Infrastructure, this figure has increased by circa £2.0M from AIR10. The increase is due to the inclusion of the costs of leakage repairs in line with the PC10 Final Determination which were previously treated as capital.
- Line 24: Non-infrastructure, this figure has reduced by circa £0.8M from AIR10. The costs have decreased in AIR11 primarily due to the reduction in power costs as a result of the cessation of NIW's fixed price contract with ESB for the supply of electricity. The contract ended on 30 September 2010.

PPP – Alpha

A contract with Dalriada Water Ltd. was signed on 30 May 2006 for the provision of bulk drinking Water supplies. This has a capital cost in the region of £111M. The service provision has commenced roll-out from 2008. The contract is for 25 years with an end date of 29 May 2031.

Charge to the profit and loss

This transaction is treated as an on balance sheet PFI transaction and the unitary charge is thus accounted for in the following components:

- [REDACTED] In 2010/11 the net charge to the profit and loss account in respect of the service element of the Alpha unitary payments [REDACTED]
- [REDACTED] In 2010/11 the charge to the profit and loss account in respect of the finance charge element of the Alpha unitary payments was [REDACTED]
- In 2010/11 an amount of [REDACTED] (2009/10 [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 2010/11 an amount of [REDACTED] (2009/10 [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 £4.0M (2009/10 £3.4M).

Leakage costs

Operating costs relating to leakage have increased from £3.8M in AIR10 to £5.7M in AIR11 primarily due to the inclusion of the costs of leakage repairs in line with the PC10 Final Determination which were previously treated as capital. Capital expenditure has decreased from £6.8M to £3.3M primarily to the change in treatment of the costs of Leakage Repairs as previously mentioned.

Table 22 – NI Water Total

A - Direct Costs

Total Functional Expenditure in Table 22 has decreased by circa £19M from AIR10 to AIR11. This is primarily due to the decrease in Hired and Contracted Services (£9M) and General & Support expenditure (£6M) and is explained on a line by line basis below:

- Line 1: Employment costs have increased by £0.4M from AIR10. With the introduction of the Cost-to-Serve project these costs are now included within expense line 611X Cost Reallocations. As per the AIR10 recommendation the VER costs for Sewerage, Sewage Treatment and Sludge Treatment & Disposal have been directly included in line 1.
- Line 2: Power costs include electricity costs and fuel costs for power generation. The costs have decreased in AIR11 by circa £2M primarily due to the cessation of NIW's fixed price contract with ESB for the supply of electricity. The contract ended on 30 September 2010.

In AIR11 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 AIR10.

There is one electricity meter at Duncrue Street which includes the costs for the Belfast WWTWs and the Incinerators which are operated by PPP in 2010/11. 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 AIR10 (based on an estimated KWhr usage at each of the sites) however, due to a second Incinerator at the Duncrue Street site, the Incinerator is now more heavily weighted for the purpose of allocations. The AIR10 split was 60:40.

Power costs include £3.7M for PPP.

- Line 3: Agencies – there are no costs in this line.

- Line 4: Hired and Contracted have decreased by circa £9M, with circa £8M in Sludge Treatment & Disposal, circa £1M in Sewage Treatment with the small balance in Sewerage. The reduction in Sludge Treatment & Disposal is primarily due to the Incinerator being operated by PPP in 2010/11. Sewage Treatment has been reduced by circa £1M due to three PPP sites, included in AIR 10 which are not included in AIR11, as they have been under PPP control in 2011.
- Line 5: Associated companies– there are no costs in this line.
- Line 6: Materials & Consumables have decreased by £1.1M from AIR10 to AIR11. This is driven by a £1.0M reduction in Sludge Treatment & Disposal which is due to PPP operating the Incinerator in 2010/11.
- Line 7: Service Charges– there are no costs in this line.
- Line 8: Other Direct Costs have decreased by circa £1.3M. As mentioned in line 1 above in AIR10 616X Vehicle and Plant charges were included in line 8 Other Direct Costs, however with the introduction of the Cost-to-Serve project these costs are now included within expense line 611X Cost Reallocations in line 1 Employment Costs.
- Line 9: Total Direct Costs – this is a calculated line and is the total of lines 1-8. AIR11 direct costs are circa £13M lower than the AIR10. This is driven by Hired and Contracted Services as detailed in line 4 above.
- Line 10: At a total NI Water level, being the totals of Tables 21 and 22 together, General & Support Expenditure has remained constant. However the allocation of these costs has changed significantly in line with the relative changes in direct costs. In Table 22 these have significantly reduced from circa £27M AIR10 to circa £21M in AIR11. The reason for the decrease in the costs is the reduction of the percentages used to allocate General and Support expenditure. The percentages used are calculated on the total Direct Costs, and in AIR11 the total of direct costs of Table 22 have greatly reduced resulting in a shift from 56.6% in AIR10 to 45.9% in AIR11. Service Activities are mapped to the NIAUR service areas in **Appendix 2**. See the **Allocation of costs between service areas** section at the start of the commentary.

The NI Water Total costs include circa £0.2M for PPP. This is circa £0.9M lower than AIR10 as Consultancy costs have reduced significantly with the cessation of a construction phase and full operational commencement.

- Line 11: This is the calculated total line for Functional Expenditure which has decreased by circa £19M. This reduction is driven by the £9M reduction in Hired and Contracted Services (line 4) and £6M reduction in General & Support expenditure (line 10). Line 11 includes costs of [REDACTED] associated with PPP.

B - Operating Expenditure

- Line 12: Customer Services costs have decreased by over £7M compared to AIR10. This is primarily due to the AIR10 including costs set aside for a commercial claim being made against NI Water. In

addition, consultancy costs have decreased, due to reduced project work. Customer Services costs are apportioned based on the percentage of direct costs from Table 21 & 22. In AIR11 the percentage split was calculated at 54.3% Table 21 and 45.7% Table 22. In AIR10 the percentage split was 44.2% and 55.8% between Table 21 & 22 respectively.

- Line 13: Scientific Services costs have decreased by circa £0.4M from AIR10. Scientific Services costs have been split using the same percentage as Customer Services as detailed above in line 12. At the total NI Water level, being the totals of Tables 21 and 22, the costs are consistent with AIR10 but the allocation for Table 22 has changed from 56% in AIR10 to 46% in AIR11. Line 13 includes £0.1M of costs associated with PPP.
 - Line 14: Other Business Activities have decreased by circa £0.4M from AIR10. This is mainly due to a reduction in Regulatory costs. 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. The decrease from AIR10 is over £8M and is driven by the reduction in Customer Services, see line 12.
 - Line 16: Local authority rates have reduced by £2.3M from AIR10. There was a significant credit recovered in 2010/11 for past years rates on Waste Water Treatment Works. Line 16 includes £0.9M for PPP rates.
 - Line 17: Doubtful debts have increased from the AIR10 position of circa £0.5M to circa £0.9M. The increase is due to an increase of £0.2M in write offs and a more prudent provision for certain customer sectors (e.g. hospitality, construction) given the current general economic conditions.
 - These costs have been split between Table 21 and 22 on a specific line by line basis, and results in a percentage split of 68% and 32% respectively. This compares to 58% and 42% respectively in AIR10 split primarily on the pro-rated income split.
 - Line 18: Exceptional items– there are no costs in this line.
 - Line 19: Total opex less third party services – this is a calculated line and is the total of Line 11, 15, 16, 17 and 18. This has reduced by circa £29M from AIR10 and is driven by £9M reduction in Hired and Contracted Services (line 4), and £6M reduction in General & Support expenditure (line 10), £7M reduction in Customer Services (line 12).
 - Line 20: Third party services have remained constant.
 - Line 20a: Total PPP Unitary Charge has increased by circa [REDACTED] as a result of full year usage of the PPP sites and the transfer of the Incinerator to PPP. See Table 42 commentary for details.
- Line 21: Total operating expenditure, this is a calculated line and is the total of line 19, 20 and 20a. This line has decreased by circa £21M from AIR10. This is driven by the £9M reduction in the Hired and Contracted Services (line 4), the reduction in General & Support expenditure of £6M (line 10) and the £7M reduction in Customer Services (line 12). Offset by an [REDACTED] increase in PPP Unitary Charge (line 20a). This agrees to Table 36 line 21.

Total operating expenditure includes [REDACTED] of costs associated with PPP.

- Line 21a: Payments to Operators for Sewerage Services has increased by circa [REDACTED] to [REDACTED] in AIR11. The Sewage Treatment increase of £1.3M reflects the inclusion of all Omega sites for a full year of service and for the variation in flows (and loads in the case of Kinnegar) received from the NIW Catchments' upon which the Contractors and Operators revenue payments are based. Payments to the Operators for Sludge Treatment and Disposal Services have changed to reflect that last year [REDACTED] was included for the remediation of the Ballynacor Sludge Lagoons only, as the Omega Sludge Disposal Service had not commenced. This years figure represents a full year's payment to the Operator for Sludge Disposal Services only [REDACTED]. No further payments in respect of Ballynacor Sludge Lagoons remediation has been made in the reporting period as the next milestone for payment has not yet been achieved.

C - Reactive & Planned Maintenance

- Line 22: Infrastructure, this figure has reduced by circa £0.3M from AIR10 to £5.3M.
- Line 23: Non-infrastructure, this figure has reduced by circa £0.6M from AIR10 to £15.2M.

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 [REDACTED]. 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 2010/11 the charge to the Operating Costs Statement in respect of Kinnegar was [REDACTED] (2009/10 [REDACTED]). The gross charge was [REDACTED] (2009/10 [REDACTED]) with [REDACTED] (2009/10 [REDACTED]) capitalised in relation to the residual interest asset

Omega

A contract with Glen Water Ltd was signed on 6 March 2007 for the provision of Sewerage treatment and sludge disposal at six sites with a capital cost in the region of [REDACTED]. The contract is for 25 years with an end date of 5 March 2032.

The PFI property involved is not an asset of NI Water but since the assets will revert to NI Water at the end of the contract, part of the unitary charge has been capitalised as a residual interest asset. In 2010/11 the charge to the Operating Costs Statement in respect of Omega was [REDACTED] (2009/10 [REDACTED]). The gross charge was [REDACTED] (2009/10 [REDACTED]) with [REDACTED] (2009/10 [REDACTED]) capitalised in relation to the residual interest asset.

An amount of [REDACTED] was charged to the Profit and Loss Account in 2010/11 in respect of an increased provision for claims from Glen Water giving rise to a

total Profit and Loss Account charge for Omega for 2010/11 of [REDACTED] (2009/10 [REDACTED]).

Reactive and planned maintenance

The overall approach and allocation process for Tables 21 and 22 has remained consistent with AIR10. 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

Total pension costs of £11.7M (AIR10 £10.7M) which amounts to £12.4M net of interest credit (AIR10 £11.0M) were charged to the profit and loss account. This is made up of current service costs of £11.3M (AIR10 £7.8M) and past service costs of £1.1M (AIR10 £3.2M). 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 £13.1M (AIR10 £18.5M) including £3.2M relating to payment of 2009/10 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.

The percentage contribution level for the year ended 31 March 2011 was approx. 26.9% of pensionable pay within the profit and loss account.

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.

There is no deficit payments associated with the pension fund as the scheme has been in surplus since inception.

Further disclosures on pensions are contained in the statutory accounts which are based on the company's actuarial report at 31 March 2011.

Third party costs

Third party costs relate primarily to services recharged to third parties. These costs include labour, materials, vehicles and overheads to reflect a best estimate of the full cost to the company of supplying these services. These

services include unplanned work (e.g. repairs to rectify damage by third parties to company assets) and planned work (requests for the company to carry out small works). The associated income is reported in Table 23 as third party income.

Infrastructure Renewals Charge (IRC)

See Commentary for Table 33.

Table 21 - Water Service (PPP only)

Line 2 - Power Costs

Power costs have fallen by 3% from the AIR10 reported figure of £6.473m. This has been driven by reduced prices negotiated in year.

Line 9 - Other Direct Costs

No variation. No costs incurred.

Line 11 - General & Support Expenditure

General and support expenditure has been calculated on the same basis as for AIR10.

As 2010/11 was Alpha's second fully operational year support staff and consultancy costs have reduced as systems and procedures have become established. Hence the reduction in general and support costs for AIR 11.

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

The in year release of a rates over accrual from 2009/10 has resulted in a slightly reduced rates charge of £2.7m in 2010/11.

Line 21a - PPP Unitary Charges (Opex)

This line data is drawn directly from the Company's accounts. No additional reconciliation is required.

During 2010/11 the Alpha Concessionaire recognised performance deductions of [REDACTED] and this is reflected in the [REDACTED] opex charge. The charge also includes atypical income of [REDACTED] as follows:

Quality Monitoring Change credit	[REDACTED]
Refund in respect of reorganisation costs	[REDACTED]
Release from 0910 accrual	[REDACTED]
Total	[REDACTED]

Further details on each of these are given in the commentary to table 42 line 10.

The increase of [REDACTED] in the unitary charge cost in AIR11 is made up as follows:

Inflationary increase in capacity charge	[REDACTED]
Increase in volumetric charge (inflationary and flow related)	[REDACTED]
Reduction in performance deductions	[REDACTED]
Reduction in atypical credits	[REDACTED]
Increase in amounts capitalised	[REDACTED]
Increase in interest element of charge	[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 22 - Sewerage Service (PPP only)

Line 2 - Power Costs

AIR 11 includes costs for Ballynacor [REDACTED] and Duncrue [REDACTED] facilities which achieved service commencement in 2010/11 hence the increase in power costs of [REDACTED] from AIR10.

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).

Kinnegar: Power costs are not recorded as (i) they are not paid by the Company and (ii) they are part of the Unitary Charge payment to the Concessionaire and in addition cannot be determined directly as the Concessionaire is not obliged to report on AIR matters from this early PFI Contract.

Line 8 - Other Direct Costs:

Nil

Line 10 - NIW only General & Support Expenditure

The general and support expenditure has been calculated in the same way as for AIR10 reflecting all costs associated with P101 cost centre. These costs are significantly lower in AIR11 as consultancy costs associated with the Omega contract were £875k in 2009/10 (reflecting the construction phase of the contract) and are nil for 2010/11 (reflecting all sites being in service and thus a significantly reduced consultancy requirement). This nil cost arises as a result of an over accrual of £150k at the March 10 year end.

Total general and support costs associated with the Omega contract were calculated at £165k and two sevenths of this has been allocated to column 3 to reflect costs associated with Duncrue and Ballynacor sludge facilities, the remaining five sevenths are associated with the 5 Omega WWTW facilities.

Line 13 - Scientific Services

Scientific Services costs reflect the contract sampling and analysis costs borne by the Company in providing its sampling and analytical contractual obligations to the Kinnegar and Omega Facilities in Service: Kinnegar, North Down, Richhill, Ballyrickard, Ballynacor and Armagh. This cost has risen in AIR11 as a result of the inclusion of Ballynacor costs in 2010/11.

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 increased rates cost in AIR 11 arises from the inclusion of Ballynacor (£335k) and Duncrue (£95k).

Line 20a - PPP Unitary Charges (Opex)

The charge for Kinnegar included in this line of [REDACTED] reflects the invoiced/accrued amounts for the year reduced by the credit for residual interest.

The Omega charge of [REDACTED] reflects unitary charge invoiced and accrued of [REDACTED], increase in contractor claim provision of [REDACTED] and the credit for residual interest of [REDACTED].

The charge on this line has increased by [REDACTED] from AIR10. This movement can be summarised as follows:

Incinerator Charge 10/11	[REDACTED]
Ballynacor Charge 10/11	[REDACTED]
Increased Provision 10/11	[REDACTED]
Increased Provision 09/10	[REDACTED]
Flow/inflationary changes	[REDACTED]

Line 21a - Payments from Concessionaire to Operators

Column 2: Payments to Operators for Sewage Treatment has changed to reflect

- (i) The inclusion of all Omega sites for a full year of service
- (ii) The variation in flows (and loads; in the case of Kinnegar) received from the NIW Catchment upon which the Contractors and Operators revenue payments are based

Column 3: Payments to the Operators for Sludge Treatment and Disposal Services have changed to reflect that last year [REDACTED] was included for the remediation of the Ballynacor Sludge Lagoons only, as the Omega Sludge Disposal Service had not commenced. This years figure represents a full years payment to the Operator for Sludge Disposal Services only [REDACTED]

No further payments in respect of Ballynacor Sludge Lagoons remediation has been made in the reporting period, as the next milestone for payment has not yet been achieved.

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
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
556Y	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	
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

Comparator (2009-10 figures) in Table 23

As agreed with the Regulator the comparators within AIR 11 for Table 23 have been restated to take account of:

- a. the split of subsidy between measured and unmeasured income
- b. large user revenue for sewerage and trade effluent.

Actual figures for 2010-11 also take account of the above aspects.

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, which includes 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; 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 has started to collect consumption information on a monthly basis, in an effort to analyse the income better. However, this analysis will only produce results with the income in 2011/12.

Movements in Income against budget

Following on from the monitoring process detailed above, the 2010/11 year-end position of income against budget was as follows:

Income	Actual Income 2010/11 £m	Budget Income 2010/11 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	118.4	118.7	(0.3)
Domestic phasing subsidy - sewerage	128.2	127.9	0.3
Non-domestic phasing subsidy - water	1.3	1.3	0.0
Non-domestic phasing subsidy - sewerage	1.4	1.4	0.0
Domestic allowance - water	7.6	7.9	(0.3)
Domestic allowance - sewerage	3.2	3.8	(0.6)
Inflation correction subsidy	1.3	1.4	(0.1)
Septic tank subsidy	1.8	1.9	(0.1)
Total subsidy	263.2	264.3	(1.1)
Non-domestic income:			
Measured water	35.4	39.5	(4.1)
Measured sewerage	19.3	26.2	(6.9)
Unmeasured water	1.1	1.3	(0.2)
Unmeasured sewerage	1.3	1.4	(0.1)
Trade effluent	5.8	4.5	1.3
Total non domestic income	62.9	72.9	(10.0)
Road drainage income	19.9	19.9	0.0
Other	4.2	3.4	0.8
TOTAL INCOME	350.2	360.5	(10.3)

The above table includes both appointed and unappointed income.

As can be seen, non-domestic income was £10.0m under budget for 2010/11, with measured water and measured sewerage £11.0m under budget. This has arisen because of the following:

- A provision of £1.8m covering the incorrect invoicing for pipe sizes.
- An £1.0m increased provision against the accrued income.
- A further £1.0m provision against future system adjustments arising in 2011/12, but which actually relate to 2010/11 and before.
- During 2010/11, a number of reductions arose, related to incidents from the prior year, indicating that the income in 2009/10 was over-accrued. For example, leakage allowances arose related to the Freeze thaw incident in January 2010. It is estimated that the 2009/10 income was £1.1m over-stated, with the correction for this going through in 2010/11.
- A £0.6m provision for the freeze thaw major incident.
- A reduction in customer numbers and consumption from the budget, especially within sewerage. There has been evidence that consumption has been falling, in the midst of the difficult economic climate.

Trade effluent was £1.3m greater than budget, mainly due to:

- New customers in the 2010/11 year e.g. [REDACTED], [REDACTED].
- An increase in outflows and strengths from the big meat processors e.g. [REDACTED], [REDACTED], [REDACTED].

Movements in Income between 2010/11 and 2009/10

The table below details the income for the year ended 31 March, for both 2011 and 2010.

Income	Actual Income 2010/11 £m	Actual Income 2009/10 £m	Variance £m
Subsidy:			
Domestic phasing subsidy - water	118.4	118.1	0.3
Domestic phasing subsidy - sewerage	128.2	122.2	6.0
Non-domestic phasing subsidy - water	1.3	1.4	(0.1)
Non-domestic phasing subsidy - sewerage	1.4	1.4	0.0
Domestic allowance - water	7.6	8.3	(0.7)
Domestic allowance - sewerage	3.2	4.2	(1.0)
Inflation correction subsidy	1.3	0.0	1.3
Septic tank subsidy	1.8	1.8	0.0
Total subsidy	263.2	257.4	5.8
Non-domestic income:			
Measured water	35.4	40.2	(4.8)
Measured sewerage	19.3	23.6	(4.3)
Unmeasured water	1.1	1.2	(0.1)
Unmeasured sewerage	1.3	1.3	0.0
Trade effluent	5.8	4.7	1.1
Total non domestic income	62.9	71.0	(8.1)
Road drainage income	19.9	19.7	0.2
Other	4.2	4.2	0.0
TOTAL INCOME	350.2	352.3	(2.1)

The above table includes both appointed and unappointed income.

The income for measured water and measured sewerage has reduced by £9.1m. This is due to:

- A provision of £1.8m covering the incorrect invoicing for pipe sizes.
- An £1.0m increased provision against the accrued income.
- A further £1.0m provision against future system adjustments arising in 2011/12, but which actually relate to 2010/11 and before.
- A £2.2m difference arose, based on work done on the accrued income at 31 March 2010, which estimated that the income for 2009/10 was overstated by £1.1m. This is due to system adjustments which arose in 2010/11 e.g. leakage allowances increased by £1.0m in 2010/11, largely arising from the Freeze thaw incident in January 2010.
- A £0.6m provision for the freeze thaw major incident.
- A reduction in consumption from the 2009/10 year.

- The volume tariff in water fell by 1.5%, while the sewerage volume tariff increased by 4.6%.

The income for trade effluent has increased by £1.2m, mainly due to:

- New customers in the 2010/11 year e.g. [REDACTED], [REDACTED].
- An increase in outflows and strengths from the big meat processors e.g. [REDACTED], [REDACTED] and [REDACTED].

Reconciliation of Billed Income to Income in the Accounts

The tables below detail, for both measured/unmeasured and for trade effluent, how the income billed (both invoices and system adjustments) reconciles to the income reported at 31 March 2011:

Measured and unmeasured income	
	£m
Invoiced income	59.3
System adjustments	5.6
Billed income	<u>64.9</u>
Movement in accrued income	(2.6)
Pipe size provision	(1.8)
Movement in provision against DCR	(1.8)
Provision for major incident	(0.5)
Provision for [REDACTED] and [REDACTED]	(0.5)
Reduction in test meter accrual	(0.5)
Reduction in [REDACTED] accrual	(0.1)
Total income per accounts	<u><u>57.1</u></u>

Accrued income at 31 March 2011 represented 13% of billed income in the year

Trade effluent	
	£m
Invoiced income	6.2
System adjustments	(0.2)
Billed income	<u>6.0</u>
Movement in accrued income	(0.1)
Provision for major incident	(0.1)
Total income per accounts	<u><u>5.8</u></u>

Accrued income at 31 March 2011 represented 11% of billed income in the year

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 2010/11, and are not expected to recur:

- The movement in accrued income comes about mainly through a bill run relating to March 2010 being carried out in April 2010. The estimated bill run is now done in the actual month which it relates to.
- Pipe size provision – this is the provision for the impact of customers being billed at the wrong standing charge.
- Provision for [REDACTED] and [REDACTED] – this relates to one-off system adjustments, which went through income in April 2011.
- Reduction in [REDACTED] accrual – this relates to an over-statement of the accrual at 31 March 2010.

The following adjustments may recur in future years:

- DCR provision – this is a provision related to work carried out identifying that the income was over-accrued at 31 March 2010. The scale of the provision may change from year to year.
- Major incident – the extreme weather conditions experienced in December 2010. A recurrence of these conditions cannot be ruled out in future years and this is something outside of the control of the company.
- Test meter accrual – it is expected that this will recur in 2011/12, once all the test meters have been invoiced.

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).
- FA prepares an analysis of the income to ensure that it agrees with what MA has calculated. This is signed off by FA and MA each month (see Appendix E).
- The accrued income account is reconciled each month by FA (see Appendix F).
- The number of meters to be billed is reconciled to what has actually been billed (see Appendix G).
- The billed income for monthly customers and for the relevant six-monthly customers is compared to what was accrued in the previous month, on a meter by meter basis. The results from this are discussed at the Day 8 meeting.

In addition, Echo carry out controls on meter readings, such that a bill is “held” and not sent out to the customer if its value has exceeded a certain level, known as the “bill ceiling”. The bill will then be investigated.

Review by Internal Audit

During the 2010/11 year, Internal Audit carried out a review on Income Forecasting, Monitoring and Reporting. The main objective of the work was to identify and assess the design effectiveness of the main controls in operation over key inherent risks in relation to the monthly monitoring and reporting of income, and the quarterly forecasting of income.

The report carried a category 2 recommendation i.e. requires moderate improvement, and identified three findings:

- Analysis of the macro environment.
- Written procedures for the processes.
- Understanding of trade effluent. Unlike the first two findings, this carried a category 3 recommendation. Essentially, it recommended that the Trade Effluent Manager take a more active role in the monitoring and forecasting of trade effluent.

Work has been carried out by NI Water to ensure that the recommendations within the report have been implemented.

Balance Sheet Nominal Ledger Accounts

The table below gives details of the relevant balance sheet accounts as at 31 March 2011, together with a comparison to the balances as at 31 March 2010.

	Balance 2010/11 £m	Balance 2009/10 £m	Variance £m
Debtors (measured and unmeasured water and sewerage)	13.8	16.5	(2.7)
Debtors (trade effluent)	1.0	0.7	0.3
Unreconciled receipts	(0.3)	(0.1)	(0.2)
Bad debt provision	(6.5)	(5.5)	(1.0)
Bad debt provision (trade effluent)	(0.1)	(0.1)	0.0

The movement in the trade debtors balances can be explained, largely, by the credits adjustment of £2.2m which was made to “gross up” the balance at 31 March 2010. The £13.8m as at 31 March 2011 is stated net of credit balances.

The increase in the bad debts provision reflects the increased provisions set against certain industry groups in the light of the current difficult economic climate.

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.

The accrued income in the balance sheet has fallen by £7.3m for measured water and sewerage and by £0.2m for trade effluent (see table below). This is due to:

	Accrued Income 2010/11 £m	Accrued Income 2009/10 £m	Variance £m
Accrued income:			
Measured water and sewerage	8.1	15.4	(7.3)
Trade effluent	0.6	0.8	(0.2)
TOTAL ACCRUED INCOME	8.7	16.2	(7.5)

This fall of £7.5m can be explained as follows:

- The level of accrued income, before provisions, has fallen by £2.7m, of which the DCR has reduced by £2.6m. The accrued income for March/September customers has fallen by £2.4m, as the “estimated run” for these customers was carried out in March 2011 (rather than delayed until April, as was the case in 2010).
- The provision against accrued income has increased from £0.5m at 31 March 2010 to £5.3m 31 March 2011 (an increase of £4.8m). This increase is due to the factors outlined in the tables on page 7.

Income billed in 2010/11, compared to accrual at 31 March 2010

Following on from a management letter point arising from the 2009/10 audit, an exercise was carried out to assess the income billed in 2010/11, compared to what was accrued at 31 March 2010. An in-depth report is unavailable; however, the report identified that the income accrued was over-stated, mainly because of old negative system adjustments which arose in the year, but were not taken into account in the accrual.

For the accrual at 31 March 2010, it was estimated that the income was over-accrued by £1.1m. This has led to NI Water increasing the provision against the accrued income.

Subsidy Income

In 2010/11, NI Water had total subsidy income of £263.2m. This was broken down as follows:

- £246.6m for domestic phasing subsidy for water and sewerage, in lieu of domestic charges.
- £2.7m for non-domestic phasing subsidy, representing 50% of unmeasured non-domestic income.
- £10.8m for domestic allowance subsidy, representing the domestic allowance claimed by customers for both water and sewerage.
- £1.3m for inflation subsidy, a subsidy which is not due to recur in future years. The subsidy arose as a result of the different approaches adopted in respect of inflation in the PC10 Final Determination and in the NI Water Charges Scheme for 2010/11.
- £1.8m 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 2010/11 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 the Regulator and by DRD. A total of £19.87m was invoiced in 2010/11 to Roads Service, compared to £19.67 in 2009/10. A more detailed breakdown of the assumptions behind the calculation is provided in Appendix H.

	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)	32,324,700	31,875,300	64,200,000
Mogden Formula element	R+V	R	
Cost of Element	0.41157	0.19344	
Cost of Run off	13,303,877	6,165,958	19,469,835
Inflationary uplift (0.28% - 2.3%)			397,249

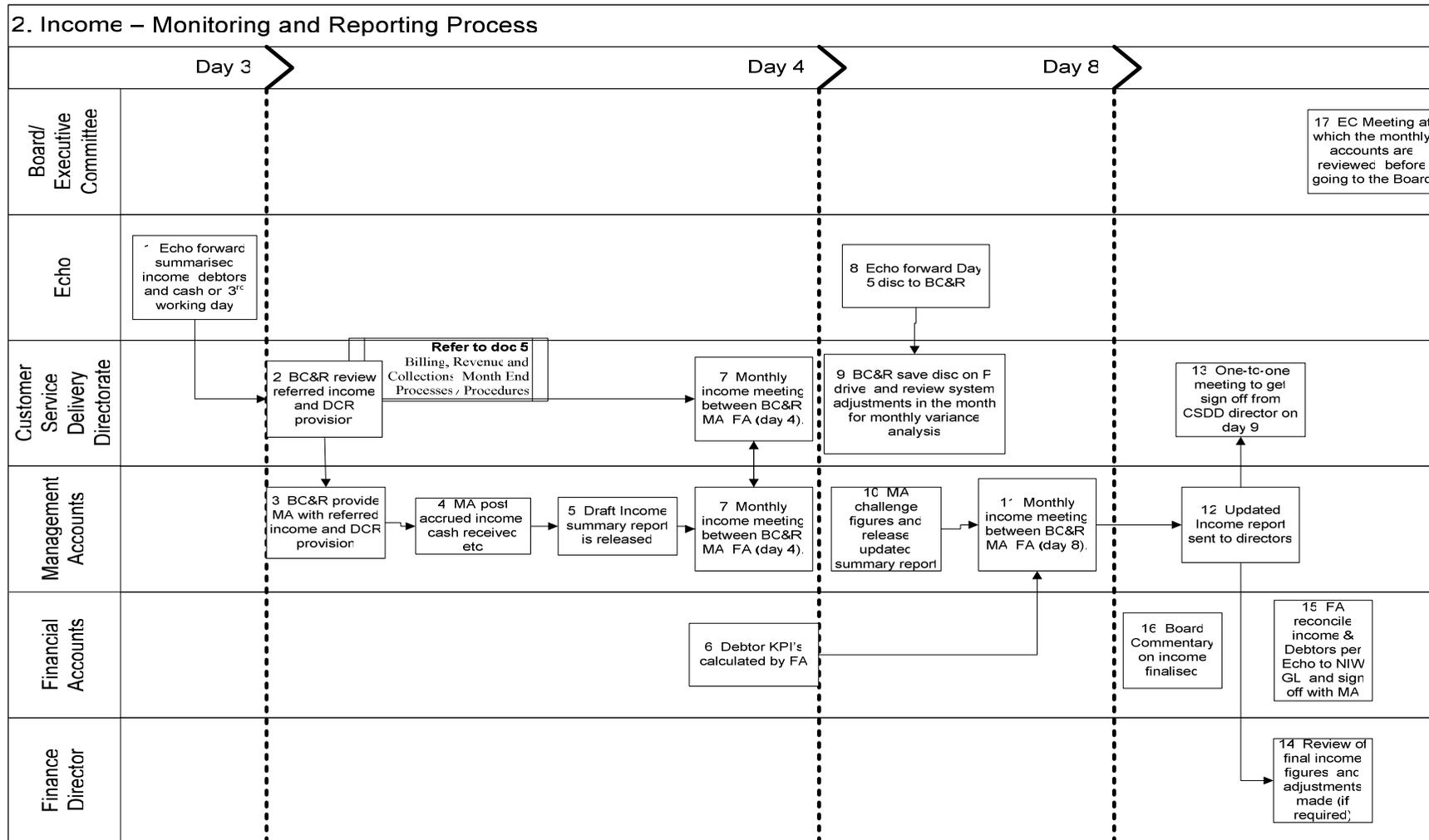
Non tariff Basket Income

There is no net income movement out of the tariff basket for either water or sewerage.

Other Income

Other income was £4.2m for the 2010/11 year, against a budget of £3.4m, largely as a result of increased income from rechargeable works and vehicle maintenance.

Appendix A - Monthly Process for Monitoring Income



Appendix B – Day 5 Data received from Echo

File Name	Output	Reconciliations & Checks
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

Extract for Finance Summary

YTD income 1st Apr to end of Previous Month	31-Mar-11		from Echo	Accrued Income	Accrued Income	Referred Income	Referred Income	Deferred Income	Deferred Income	Monthly	DIFFERENCES																
	Disc	Reverse Previous									For this month	Reverse Previous	For this month	Reverse Previous	For this month	Closing Balance	GL01 report	Diff	accrual	Further provision against DCR	Increased / (Decreased) DCR provision	Release of test meter provision	Pipe size provision	provision	Extra prov for futur sys adjs	Legacy debt adj	Diff
4211 Measured Water	33,346,353	3,940,808	(8,864,841)	7,910,167	377,544	(70,366)				3,233,412	37,639,765	35,402,508	(2,237,257)	4,702	(150,000)	41,868	(275,664)	(1,257,900)	(600,000)	(262)	(1)						
4311 Measured Sewerage	19,057,436	2,171,351	(5,758,506)	5,398,687	144,025	(22,925)				1,932,632	20,990,068	19,281,086	(1,708,982)	6,502	(100,000)	29,158	(225,543)	(539,100)	(400,000)		1						
4251 Unmeasured Water	1,056,662	(7,493)								79,522	1,128,691	1,128,691	0								0						
4351 Unmeasured Sewerage	1,168,666	(7,978)								82,347	1,242,935	1,242,935	(0)								(0)						
4411 Trade Effluent	5,375,941	342,724	(573,472)	683,172						452,424	5,828,365	5,832,103	3,738		3,738						0						
	61,004,958	6,439,512	(15,196,820)	13,992,026	521,569	(93,291)	161,869	0	5,824,865	66,829,823	62,887,323	(3,942,500)	11,204	(250,000)	74,764	(501,207)	(1,797,000)	(480,000)	(262)	0							

Appendix D – Reconciliation of Debtors account on Oracle**NI WATER LIMITED AS AT 31 MARCH 2011****Summary of Debtors**

Water & Sewerage Debtors GL code 1210	March 2011
Opening Balance	£13,682,220.56
Take on Bills/New Bills- TOTAL	£5,695,870.30
Take on Bills/New Bills- Sewerage	2,120,687.34
Take on Bills/New Bills- Water	3,421,133.58
Take on Bills/New Bills- VAT	154,049.38
Annual Billing	£0.00
Annual Billing - VAT	0.00
Discounts	-13546.88
System Adjustments- Total	£686,326.91
System Adjustments- Sewerage	79,741.10
System Adjustments- Water	488,944.32
System Adjustments- VAT	117,641.49
Manual Adjustments- Total	£75,860.11
Manual Adjustments- Sewerage	(37,728.65)
Manual Adjustments- Water	13,776.09
Manual Adjustments- VAT	99,812.67
Write Off Adjustments Total	£10,262.83
Write Off Adjustments- Sewerage	668.10
Write Off Adjustments- Water	9,565.32
Write Off Adjustments- VAT	29.41
NIWS Bad Debt Authorised Write Off- Total	-£103,292.37
NIWS Authorised Write Off- Sewerage	(43,259.09)
NIWS Authorised Write Off- Water	(59,335.86)
NIWS Authorised Write Off- VAT	(697.42)
Net Cash	(6,860,364.32)
Refunds	329,979.65
Water & Sewerage GL code 1210 Closing Balance	£13,503,316.79

Check	
Metered & Unmetered Water & Sewerage Debtors	£13,503,316.79
(AS per Crystal)	
Per Tb GL code 1210	13,761,130.05
Variance	-£257,813.26

Due to:

Variance (Oct = w/off Income 0708 in Oct08)	
Referred Bills NOT Recognised NET	93,291.00
Domestic Allowance	
Test Meters	£904,213.12
Add Test Meters	£590,151.00
Test meter provision	-£750,000.00
Release Test Meters billed in March 11	-£390,000.00
Reduce Test Meters income accrued at 31.03.11	-£111,207.00
Voided not billed in Unmeasured	£81,500.33
	£26,745.00
Unknown	-£298.19

Trade Effluent Debtors GL code 1213	
Opening Balance	£1,366,106.72
Take on Bills/New Bills	365,257.11
System Adjustments	-£3,532.02
Manual Adjustments	-£19,001.29
NIWS Authorised Bad Debt Write Off	£0.00
Net Cash	-£675,568.75
Refunds	
Trade Effluent GL code 1213 Closing Balance	£1,033,261.77
Variance	£0.00
Per Trial Balance general ledger code 1213	1,033,262

Total Opening Balance GL code 1213 & 1210	£15,048,327.28
Take on Bills/New Bills	£6,061,127.41
Annual Billing	£0.00
Discounts	-£13,546.88
System Adjustments	£682,794.89
Manual Adjustments	£56,858.82
Write Off Adjustments	£10,262.83
NIWS Authorised Bad Debt Write Off	-£103,292.37
Net Cash	-£7,535,933.07
Refunds	£329,979.65
Total Closing Balance GL code 1213 & 1210	£14,536,578.56

Prepared By

Date

Reviewed By

Date

Appendix E – Analysis of income between FA and MA**NIWL Income Analysis March 2011**

Measured & Unmeasured Income	
Take on Bills/New Bills	YTD March
Take on Bills/New Bills- Sewerage	21,584,403
Take on Bills/New Bills- Water	34,547,436
Annual Billing	3,137,652
System Adjustments- Total	
System Adjustments- Sewerage	1,359,093
System Adjustments- Water	6,188,464
Manual Adjustments- Total	
Manual Adjustments- Sewerage	-792,916
Manual Adjustments- Water	-1,718,190
Write Off Adjustments Total	
Write Off Adjustments- Sewerage	3,016
Write Off Adjustments- Water	-657
Reversed Previous Year End accruals	
Measured Water	-9,490,802
Measured Sewerage	-6,433,220
Current Months Accruals	
Measured Water	7,910,167
Measured Sewerage	5,398,687
Referred Bills	
Reversed YE referred Bills	85,795
Referred Bills adjusted in the month (Based on PMN figure)	-93,291
YTD & High Affinity Debt Adjustments	
increased in June	24,981
Provision for ██████████ - Sept 10	-100,000
██████████ system adjustment in June	123,900
██████████ system adjustment in July	-41,300
██████████ system adjustment in August	-41,300
██████████ system adjustment in September	-41,300
Provision for ██████████ system adjustment	-60,000
██████████ provision release	60,000
██████████ income adjustment August	-250,000
██████████ system adjustment release	250,000
██████████ moved to income - Nov 10	-200,000
██████████ release	200,000
Adjust for High Affinity Write offs included in system adjustments	618,069
Increase in DCR Provision Sept 10	-32,832
Increase in DCR Provision Oct 10	-58,270
Decrease in DCR Provision Nov 10	488,581
Increase in DCR Provision Dec 10	-152,447
Decrease in DCR Provision Jan 11	187,910
Further Increase per final meeting in DCR Provision - Jan 11	-250,000
Major Incident Provision	-312,500
Major Incident Provision	-208,334
██████████ Provision Release	-140,797
██████████ Accrual	5,421
Increase in DCR Provision	-63,439
Further Increase in DCR Provision	-500,000
██████████ Accrual	10,120
Release of ██████████ Accrual	100,000
Per management Accounts GL Summary	61,002,101
	-61,001,459
Difference	642
Movement in the month	
Increase in DCR Provision	-71,026
Further Increase in DCR Provision	250,000
██████████ Accrual	-11,204
██████████ Provision	480,000
Additional Provision for system adjustments	1,000,000
Pipe Size Provision	1,797,000
Test Meter Provision	501,207
Legacy Debt Adj	262
Deferred Income	
Total Measured & Unmeasured	-57,055,220
Total	- 57,055,220
Trade Effluent	
Take on Bills/New Bills	6,152,218
Annual Billing	0
System Adjustments	-29,501
Manual Adjustments	-126,228
Major Incident Provision	-47,506
Increase in DCR Provision	10,735
Accrued Income Analysis	
Reversed Previous Year End accruals	-810,788
Current Months Accruals	683,172
Total Trade Effluent Per B/ S Accounts	5,832,102
Total Trade Effluent Per MAB GL01	-5,832,103
Trade Effluent Difference	-1
Total YTD Income Recognised	-62,887,323

Prepared By: ██████████ Date: 15-Apr-11

Reviewed By: ██████████ Date: 15-Apr-11

Appendix F – Reconciliation of Accrued Income Account**NIW Accrued Income**

	Apr-10 £'000	May-10 £'000	Jun-10 £'000	Jul-10 £'000	Aug-10 £'000	Sep-10 £'000	Oct-10 £'000	Nov-10 £'000	Dec-10 £'000	Jan-11 £'000	Feb-11 £'000	Mar-11 £'000
Per Echo												
Measured Water	7,812	7,297	8,167	8,764	9,051	8,601	8,725	7,975	10,070	8,848	8,865	7,910
Measured Sewerage	5,481	4,738	5,537	5,775	6,248	5,910	6,074	5,077	6,501	5,579	5,759	5,399
Trade Effluent	768	674	672	698	641	654	741	703	827	752	573	683
Accrued income	14,061	12,709	14,376	15,237	15,939	15,166	15,540	13,756	17,399	15,179	15,197	13,992
Accrued income adjustment	-537	-537	-537	-537	-537	-884	-945	-431	-1,270	-1,212	-1,779	
DCR Provision												-389
DCR Further												-1,000
System Adjustment Provision												-1,000
Major Incident												-565
Pipe Size Provision												-1,797
██████████												-317
██████████												-163
Accrued income posted	13,524	12,172	13,839	14,700	15,402	14,282	14,595	13,325	16,129	13,967	13,418	8,761
Per TB	13,524	12,171	13,838	14,700	15,402	14,282	14,595	13,325	16,128	13,967	13,418	8,761
Difference	-	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0 -	0
Miscellaneous accrued Income	130	145	163	189	575	322	494	364	406	746	398	391
Interest Received Accrual	6	11	9	17	11	10	7	7	11	12	12	10
Total Accrued Income	13,660	12,327	14,011	14,906	15,988	14,614	15,096	13,697	16,545	14,725	13,828	9,162

Signed:

TB Code Split:-

1420	1420	8,119,966.53
1423	1423	640,684.36
1426	1426	391,096.29
1451	1451	10,392.76
		9,162,049.94

Appendix G – Reconciliation of Meters**2010/11 - Meter Reconciliation Analysis**

Meters to be read	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Estimated	4,654	5,099	1,875	3,508	2,342	1,293	1,125	1,307	4,643	3,028	1,837	1,107
No Read	106	38	35	43	144	239	510	328	236	836	243	409
Read	10,395	11,227	9,648	7,990	9,527	12,699	12,053	12,955	5,287	7,153	10,062	12,865
Total Meters	15,155	16,364	11,558	11,541	12,013	14,231	13,688	14,590	10,166	11,017	12,142	14,381
No Reads to be investigated - Code Red	9	4	4	6	5	7	16	42	11	144	38	13

Meters to be billed	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Billable Meters	13,393	14,454	10,072	10,309	11,951	13,924	13,625	14,481	10,108	10,967	12,032	14,272
Non-Billable Meters	1,762	1,910	1,486	1,232	62	307	63	109	58	50	110	109
Total Meters	15,155	16,364	11,558	11,541	12,013	14,231	13,688	14,590	10,166	11,017	12,142	14,381
Total Meters Billed	13,230	14,285	9,934	10,164	11,765	13,662	13,106	14,186	9,879	10,107	11,813	13,907
Meters to be investigated	163	169	138	145	186	262	519	295	229	860	219	365
Billable Meters	13,393	14,454	10,072	10,309	11,951	13,924	13,625	14,481	10,108	10,967	12,032	14,272
Meters to be investigated - Code Red	37	42	35	40	3	6	9	7	2	139	9	4

Appendix H – 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 = 56.3 million m²
- ii The average annual rainfall in Northern Ireland over the last 10 years was obtained (Source: Met Office).
Average annual rainfall = 1.14m
- iii The average volume of rain and therefore the run-off from roads and footpaths discharged into NIW sewers and storm drains was calculated as follows:
 $56.3\text{million m}^2 \times 1.14\text{m} = 64.2\text{million m}^3$
- iv 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%

- v The unit costs of R & V applied were obtained using the Trade Effluent Mogden Formula as per the table below:

Mogden Formula element	Cost Per cubic metre	Application
R (Reception)	0.19344	Run off into Storm water sewers
V (Volumetric)	0.21813	Run off into Combined sewers
R+V	0.41157	

Note: The R and V tariffs listed assume forecast inflation of 0.28% and are as listed in our Scheme of Charges. However DRD have agreed that a forecast inflation assumption of 2.3% and have agreed an uplift to our revenues accordingly.

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
				2008-09	2009-10	2010-11
A FIXED ASSETS						
1	Tangible assets	£m	3	6958.883	7389.297	7825.616
2	Third party contributions	£m	3	-114.399	-141.802	-198.736
B OTHER OPERATING ASSETS AND LIABILITIES						
3	Working capital	£m	3	-96.960	-91.609	-79.116
4	Cash	£m	3	3.554	0.349	-3.272
5	Short term deposits	£m	3	19.000	10.000	15.000
6	Overdrafts	£m	3	0.000	0.000	0.000
7	Infrastructure renewals prepayment/(accrual)	£m	3	0.091	1.452	-3.044
8	Net operating assets	£m	3	-74.315	-79.808	-70.432
C NON-OPERATING ASSETS AND LIABILITIES						
9	Borrowings	£m	3	0.000	0.000	0.000
10	Non-trade debtors	£m	3	1.486	1.491	0.010
11	Non-trade creditors due within one year	£m	3	-4.385	-3.833	-3.844
12	Investment - loan to group company	£m	3	0.000	0.000	0.000
13	Investment - other	£m	3	0.106	0.106	0.106
14	Corporation tax payable	£m	3	0.000	0.000	0.000
15	Ordinary share dividends payable	£m	3	0.000	0.000	0.000
16	Preference share dividends payable	£m	3	0.000	0.000	0.000
D CREDITORS: AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR						
17	Borrowings	£m	3	-457.560	-627.560	-737.560
18	Other creditors	£m	3	-110.808	-106.136	-102.624
E PROVISION FOR LIABILITIES AND CHARGES						
19	Deferred tax provision	£m	3	-30.653	-42.713	-144.282
20	Post employment asset / (liabilities)	£m	3	5.942	2.286	4.586
21	Other provisions	£m	3	-20.638	-32.884	-19.349
F PREFERENCE SHARE CAPITAL						
22	Preference share capital	£m	3	0.000	0.000	0.000
23	Net assets employed	£m	3	6153.659	6358.444	6553.491
G CAPITAL AND RESERVES						
24	Called up share capital	£m	3	500.000	500.000	500.000
25	Share premium	£m	3	0.000	0.000	0.000
26	Profit and loss account	£m	3	-39.058	-93.045	-227.538
27	Current cost reserve at 31 March	£m	3	5521.027	5779.799	6109.339
28	Other reserves	£m	3	171.690	171.690	171.690
29	Total capital and reserves	£m	3	6153.659	6358.444	6553.491

Table 24 – CC Balance Sheet as at 31 March 2011

The retained current cost loss for the year is £65.203m. The P&L reserves in the balance sheet decreased by £134.493m. The difference of £69.290m represents the gain on the pension fund net of deferred tax £1.160m and a prior year adjustment of £70.450m as shown below:

Retained profit for the year	£ (65.203m)
Pension scheme profit net of deferred tax	£ 1.160m
Prior year adjustment *	<u>£ (70.450m)</u>
Movement in P&L Account	£(134.493m)

*A prior year adjustment to profit and loss account reserves of £70.45m has been recognised in the current year in relation to the use of the statutory accounts IFRS tax charge and provision in the regulatory UKGAAP accounts (see commentary to table 19). The corresponding entry has been an increase in the value of the deferred tax provision of £70.450m.

The effect of the corrections on the company's CC balance sheet at 31 March 2010 was as follows:

	As previously stated £'000	Effect £'000	As restated £'000
Deferred tax provision	-42,713	-70,450	113,163
CC P&L Reserves at 1.4.09	-45,444	-47,808	-93,252
Total recognised gains and losses for the year ended 31.3.10	-47,601	-22,642	-70,243
CC P&L Reserves at 31.3.10	-93,045	-70,450	-163,495

The CC Balance Sheet for the year ended 31 March 2011 within the Regulatory Accounts includes the impact of this adjustment to the 2009-10 comparator year.

However within Table 24 the comparator for 2009-10 has not been amended to reflect this.

- 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	123.140 *	6.434	2.223	131.797
Acc. Deprec	(8.124)	-	-	(8.124)
NBV	115.016	6.434	2.223	123.673

* Includes original capital value of Alpha PPP and subsequent additions of capital maintenance indexed to give a current cost value.

Line 3: Working Capital

	Alpha	Omega	Kinnegar	Other PPP expense	Total
	£m	£m	£m	£m	£m
Accruals	1.472	10.482	1.696	0.052	13.702

Line 11: Non-trade creditors due within one year

	Alpha
	£m
Lease obligation due < 1 yr	3.593

Line 18: Other Creditors

	Alpha
	£m
Lease obligation due > 1 yr	101.247

Line 21 - Other provisions

	Omega
	£m
Provisions	14.172

Significant features and movements

Line 1: Tangible assets

See commentary to Table 19.

Line 2: Third party contributions

Increased by approximately £56.9m shown as follows:

	£m
Infrastructure contributions (including £44.6m sewers adopted)	50.3
Non Infrastructure contributions	2.6
Amortisation of non- infrastructure contributions and government grants	(3.6)
Indexation	<u>7.6</u>
	<u>56.9</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	
			INFRASTRUCTURE ASSETS	OPERATIONAL ASSETS	OTHER TANGIBLE ASSETS	SUBTOTAL	INFRASTRUCTURE ASSETS	OPERATIONAL ASSETS	OTHER TANGIBLE ASSETS	SUBTOTAL	TOTAL	
A GROSS REPLACEMENT COST			WATER SERVICE				SEWERAGE SERVICE					
1	Gross replacement cost at 1 April	£m	3	2808.959	857.402	28.117	3694.478	2718.599	1179.911	38.804	3937.314	7631.792
2	AMP adjustment	£m	3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	RPI adjustment	£m	3	154.632	26.250	1.177	182.059	161.060	50.594	1.876	213.530	395.589
4	Disposals	£m	3	0.000	-0.012	-0.304	-0.316	0.000	-0.573	-0.187	-0.760	-1.076
5	Additions	£m	3	29.370	25.149	0.497	55.016	64.997	65.808	0.370	131.175	186.191
6	Gross replacement cost at 31 March	£m	3	2992.961	908.789	29.487	3931.237	2944.656	1295.740	40.863	4281.259	8212.496
B DEPRECIATION												
7	Depreciation at 1 April	£m	3		101.435	9.285	110.720		121.485	10.290	131.775	242.495
8	AMP adjustment	£m	3		0.000	0.000	0.000		0.000	0.000	0.000	0.000
9	AMP adjustment - gross MEA revaluation	£m	3		0.000	0.000	0.000		0.000	0.000	0.000	0.000
10	AMP adjmt - amendment to remaining useful econ. live	£m	3		0.000	0.000	0.000		0.000	0.000	0.000	0.000
11	RPI adjustment	£m	3		3.912	0.640	4.552		8.033	0.557	8.590	13.142
12	Disposals	£m	3		-0.012	-0.193	-0.205		-0.561	-0.138	-0.699	-0.904
13	Charge for year	£m	3		41.158	3.886	45.044		73.417	13.686	87.103	132.147
14	Depreciation at 31 March	£m	3		146.493	13.618	160.111		202.374	24.395	226.769	386.880
15	Net book amount at 31 March	£m	3	2992.961	762.296	15.869	3771.126	2944.656	1093.366	16.468	4054.490	7825.616
16	Net book amount at 1 April	£m	3	2808.959	755.967	18.832	3583.758	2718.599	1058.426	28.514	3805.539	7389.297

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 2010 have been brought forward from the total closing balances for gross replacement cost and depreciation at 31 March 2010. The analysis across asset categories is based on analysis within the fixed asset register.

Opening GoCo Adjustment

During the year, there was an opening GoCo adjustment put through the gross replacement cost and depreciation to adjust for assets which should have been decommissioned pre-April 2007. These assets were only accounted for in March 2011 and resulted in the creation of 3 dummy assets to show that the value still remains the same. The assets were not decommissioned as normal during the year due to the fact that the total fixed asset register value should remain the same. This resulted in the re-analysis of assets between water and sewerage as below:

	Specialised	Non-Specialised	Infrastructure	Other Assets	Total
Water	(£16,478,451.03)	-	£ 3,741,614.30	-	(£12,736,836.73)
Sewerage	(£ 3,932,938.05)	-	£16,669,774.78	-	£12,736,836.73
Total	(£20,411,389.08)	-	£20,411,389.08	-	-

However, the bottom line figure still remains the same and have no effect on the total gross current replacement costs.

AMP Adjustment

There was no AMP adjustment during the year. The next AMP adjustment is planned to report in PC13.

RPI Adjustment

In April 2010, 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 2010, if there were any, as they were not indexed.

Impairment

There was an impairment of surplus lands, buildings and civils during the year totalling £22m following a review of assets for disposal by BTW Shiells.

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 - £22,734,159) were decommissioned during the year. Decommissioned assets are assets which are no longer in use but still have a net current replacement cost (NCRC) value at the time. In order to account for this, the assets are fully depreciated in year to bring the NCRC down to nil.

Additions

Additions consisted of capital expenditure incurred during the year plus adopted sewers and sewage pumping stations and PPP assets (see below). When the assets created by the capital expenditure are commissioned they are put onto the fixed asset register and depreciation commences the following month.

In accordance with the regulatory accounting guidelines, fixed asset additions are stated gross of capital contributions but net of IRE. This gives rise to the reconciliation with the capital works programme and statutory accounts below:

	£'000
Total expenditure in CWP (incl.) Operations)	159,126
Add: Water and sewer connections	3,205
Add: Capital maintenance Omega and Kinnegar	914
Add: adopted assets – infrastructure	44,565
Add: adopted assets – non-infrastructure	1,505
Less: de-capitalised assets	(488)
Add: capitalised interest	636
Less: expenditure classified as opex under IFRS	(1,104)
Other adjustments	40
Additions per statutory accounts	208,399
Less Capital maintenance Omega and Kinnegar	(914)
Add back: IRE treated as opex repairs under IFRS	1,104
Less: interest capitalised	(636)
Less: IRE	(24,897)
Add: PPP residual interest	3,143
Other adjustments	(8)
Additions per regulatory accounts	186,191

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 £113k, relating to the Alpha capital maintenance fund.

There is also additional residual interest for PFI Kinnegar asset and Omega asset of £3,143,000 which is included in Table 25 under specialised operational civil. The total residual interest at 31 March 2011 is £8,851,000 (31 March 2010: £5,553,000).

Depreciation Charge for Year

Current cost depreciation charge during the year was calculated based on the opening GCRC at 1 April 2010. 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 £97,311,110.83 (09/10: £57,290,353) as at 31 March 2011, 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
				2008-09	2009-10	2010-11
DESCRIPTION		UNITS	DP			
1	Stocks	£m	3	1.896	1.865	1.863
2	Trade debtors - measured household	£m	3	0.000	0.000	0.000
3	Trade debtors - unmeasured household	£m	3	0.000	0.000	0.000
4	Trade debtors - measured non household	£m	3	6.991	13.587	10.908
5	Trade debtors - unmeasured non household	£m	3	0.584	0.296	0.000
6	Other trade debtors	£m	3	0.710	2.907	1.021
7	Measured income accrual	£m	3	12.594	16.197	8.761
8	Prepayments and other debtors	£m	3	7.341	6.407	8.097
9	Trade creditors	£m	3	-18.030	-14.989	-9.498
10	Deferred income - customer advance receipts	£m	3	-1.509	-1.677	-1.342
11	Short term capital creditors	£m	3	-64.335	-72.643	-52.697
12	Accruals and other creditors	£m	3	-43.201	-43.559	-46.229
13	Total working capital	£m	3	-96.959	-91.609	-79.116

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	Unallocated	Total
£m	£m	£m	£m	£m
1.472	10.482	1.696	0.052	13.702

Significant movements from last year**Line 4: Trade debtors - measured non household**

This has decreased from £13.6m to £10.9m (19.9%).

Line 6: Other trade debtors

This has decreased from £2.9m to £1.0m (65.5%) primarily due to the EU grant debtor of £1.482m being discharged (along with corresponding EU grant creditor of £1.482m) and a decrease of £1m for a debtor that arose in connection with the PPP Alpha contract.

Line 7: Measured income accrual

This has decreased by £7.4m (45.9%) over the period. The calculation for accrued income has been examined during the year and additional provisioning for this has been put in place. This together with a continuing fall in consumption has accounted for the downward movement.

Line 9: Trade creditors

Trade creditors have fallen by £5.491m (36.6%) in the period. This is related to:

- A fall of approximately £14.607m (7.35%) in operating expenditure from £198.491m to £183.884m.
- A rise in accruals and other creditors of £2.633m.

Line 11: Short term capital creditors

Capital accruals have fallen by approximately £19.946m (27.5%). This is consistent with the fall in capital additions of 22.45% from 2010 to 2011.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 27 REGULATORY ACCOUNTS
MOVEMENT ON CURRENT COST RESERVE (TOTAL)**

				1	2	3
DESCRIPTION				2008-09	2009-10	2010-11
	UNITS	DP				
1	Current cost reserve at 1 April	£m	3	5542.782	5519.900	5779.799
2	AMP adjustment	£m	3	0.000	0.000	0.000
A RPI ADJUSTMENTS						
3	Fixed assets	£m	3	-23.438	294.518	382.447
4	Working capital adjustment	£m	3	0.292	-4.313	-4.898
5	Financing adjustment	£m	3	1.044	-25.217	-40.427
6	Grants and third party contributions	£m	3	0.347	-5.089	-7.582
7	Current cost reserve at 31 March	£m	3	5521.027	5779.799	6109.339

Table 27 – Movement on current cost reserve**Working capital adjustment**

The working capital adjustment includes opening stock at 1st April 2010 plus all the opening short – term debtors and creditors at 1st April 2010, with the following exclusions from the calculation:

• Stock		
Stock relating to unappointed activities		£0.006m
• Debtors		
Interest receivable		£0.010m
Debtors relating to unappointed activities		£0.265m
• Creditors		
Cash bond interest payable		£0.251m
Creditors relating to unappointed activities		£0.234m
Deferred grants and contributions < 1yr		£0.651m
PPP Finance lease creditor < 1yr		£3.593m

The following indices have been used and applied to the opening working capital balance at 1 April 2010:

RPI	2011	2010
Year end RPI	232.5	220.7
Change in 2010-11	5.34662%	

Working capital adjustment = opening working capital at 1 April 2010 x change in RPI 2010-2011 = £91,609k x 5.34662% = £4,898k

Financing adjustment

The financing adjustment can be shown as follows:

	£m
Opening net assets	6,287.994
Opening net fixed assets	7,247.495
	<u>-959.501</u>
Add back: working capital	91.609
Opening net finance	-867.892
Less:	
Ordinary share dividends payable	0.000
Deferred tax provision	113.163
Less:	
Pension asset	-2.286
Add back:	
Deferred tax liability on pension asset	0.888
Revised opening net finance	-756.127
RPI	5.35%
Financing Adjustment	<u>40.427</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
						2008-09	2009-10	2010-11
1	Net cashflow from operating activities	£m	3			133.052	137.968	151.177
A RETURN ON INVESTMENTS & SERVICING OF FINANCE								
2	Interest received	£m	3			1.840	0.247	0.212
3	Interest paid	£m	3			-18.012	-26.905	-34.640
4	Interest in finance lease rentals	£m	3			-4.193	-11.325	-12.215
5	Non-equity dividends paid	£m	3			0.000	0.000	0.000
6	Net cashflow from returns on investments & servicing of finance	£m	3			-20.365	-37.983	-46.643
B TAXATION								
7	Taxation (paid)/received	£m	3			0.000	0.000	0.000
C CAPITAL EXPENDITURE AND FINANCIAL INVESTMENT								
8	Gross cost of purchase of fixed assets	£m	3			-226.011	-213.359	-156.548
9	Receipts of grants and contributions	£m	3			6.270	6.514	6.887
10	Infrastructure renewals expenditure	£m	3			-44.058	-38.396	-24.897
11	Disposal of fixed assets	£m	3			0.790	0.494	0.251
12	Movements on long term loans to group companies	£m	3			0.000	0.000	0.000
13	Net cashflow from investing activities	£m	3			-263.009	-244.747	-174.307
D ACQUISITIONS AND DISPOSALS								
14	Acquisitions and disposals	£m	3			0.000	0.000	0.000
E EQUITY DIVIDENDS								
15	Equity dividends paid	£m	3			-33.538	-34.537	-35.570
F MANAGEMENT OF LIQUID RESOURCES								
16	Net cashflow from management of liquid resources	£m	3			35.000	9.000	-5.000
17	Net cashflow before financing	£m	3			-148.860	-170.299	-110.343
G FINANCING								
18	Capital in finance lease rentals	£m	3			-0.430	-2.906	-3.278
19	New bank loans taken out	£m	3			150.000	170.000	110.000
20	Repayment of bank loans	£m	3			0.000	0.000	0.000
21	Proceeds from share issues	£m	3			0.000	0.000	0.000
22	Net cash inflow from financing	£m	3			149.570	167.094	106.722
23	Increase/(decrease) in cash in the year	£m	3			0.710	-3.205	-3.621

Table 28 – Cashflow statement**Significant movements from last period****Line 1: Net cashflow from operating activities**

This has increased by £13.209m (9.6%). 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 28.7% from £26.905m to £34.640m. This is consistent with an additional loan drawdown of £110m in 2010-2011. 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)

Line 4: Interest in finance lease rentals

The Alpha project during 2010-2009 gave rise to £12.215m (2009: £11.325m) interest payable on the associated finance lease.

Line 8: Gross cost of purchase of fixed assets

These have decreased by £56.81m (26.6%). This is consistent with capital expenditure plans for 2010-11.

Line 10: Infrastructure Renewals Expenditure

IRE for 2010-2011 compared to 2009-2010 can be shown as follows:

IRE	2010-2011	2009-2010	Increase/(Decrease) in period	Increase/(Decrease) in period
	£m	£m	£m	%
Water	18.844	26.903	(8.059)	(30.0)
Sewerage	6.053	11.493	(5.440)	(47.3)
Total	24.897	38.396	(13.499)	(35.2)

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 £5m from the end of 2009-2010 to the end of 2010-2011 with a consequent decrease in cashflow.

Line 18: Capital in finance lease rentals.

An amount of £3.278m was made in payment against the Alpha PPP finance lease.

Line 19: New bank loans taken out

In 2010-2011 £110m 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	8.893
2	Working capital adjustment	£m	(4.898)
3	Movement in working capital	£m	7.454
4	Depreciation	£m	132.147
5	Current cost profit on sale of fixed assets	£m	(0.079)
6	Infrastructure renewals charge	£m	29.393
7	Other non-cash profit and loss items	£m	(21.733)
8	Net cash flow from operating activities	£m	151.177

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 £0.113m in respect of capital maintenance additions for Alpha PPP paid for via the unitary payments. All other capital expenditure for Alpha is accounted for through the repayment of the finance lease.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 29 REGULATORY ACCOUNTS (CURRENT COST ACCOUNTING)
RECONCILIATION OF OPERATING PROFIT TO NET CASH FLOW FROM OPERATING ACTIVITIES (TOTAL)**

				1	2	3
				2008-09	2009-10	2010-11
DESCRIPTION		UNITS	DP			
1	Current cost operating profit	£m	3	11.626	22.963	8.893
2	Working capital adjustment	£m	3	0.292	-4.313	-4.898
3	Movement in working capital	£m	3	7.258	-13.701	7.453
4	Receipts from other income	£m	3	0.000	0.000	0.000
5	Depreciation	£m	3	76.184	96.202	132.147
6	Current cost profit on sale of fixed assets	£m	3	0.050	-0.005	-0.079
7	Infrastructure renewals charge	£m	3	34.272	37.035	29.393
8	Other non-cash profit and loss items	£m	3	3.370	-0.213	-21.732
9	Net cash flow from operating activities	£m	3	133.052	137.968	151.177

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 32 FINANCIAL MEASURES

ANALYSIS OF FIXED ASSET ADDITIONS AND ASSET MAINTENANCE BY ASSET TYPE (CURRENT COST ACCOUNTING) (NIW Only)

DESCRIPTION	UNITS	DP	1	2	3	4	5	6	7
			WATER SERVICE			SEWERAGE SERVICE			TOTAL
			INFRASTRUCTURE ASSETS	NON-INFRASTRUCTURE ASSETS	SUBTOTAL	INFRASTRUCTURE ASSETS	NON-INFRASTRUCTURE ASSETS	SUBTOTAL	
A NIW ADDITIONS -NEW ASSETS (ENHANCEMENT)									
1	Water resource facilities	£m	3	0.081	0.080	0.161			0.161
2	Water treatment works	£m	3		1.486	1.486			1.486
3	Water distribution mains	£m	3	29.036	0.765	29.801			29.801
4	Service reservoirs and water towers	£m	3		5.263	5.263			5.263
5	Pumping stations	£m	3		2.660	2.660			2.660
6	Water management and general	£m	3	0.298	0.682	0.980			0.980
7	Sewerage	£m	3				64.929	0.293	65.221
8	Sea outfalls and headworks	£m	3				0.282	0.297	0.579
9	Sewage treatment works	£m	3					33.516	33.516
10	Sludge treatment works	£m	3					0.186	0.186
11	Sludge disposal	£m	3				0.000	0.000	0.000
12	In-line pumping stations	£m	3					5.229	5.229
13	Terminal pumping stations	£m	3					1.903	1.903
14	Sewerage management and general	£m	3				0.000	0.418	0.418
15	Total infrastructure additions (Enhancement)	£m	3	29.415		29.415	65.211		94.627
16	Total non-infrastructure additions (Enhancement)	£m	3		10.936	10.936		41.841	52.777
17	Total additions (Enhancement)	£m	3	29.415	10.936	40.352	65.211	41.841	107.052
B NIW BASE SERVICE PROVISION									
18	Water resource facilities	£m	3	0.326	0.173	0.499			0.499
19	Water treatment works	£m	3		4.520	4.520			4.520
20	Water distribution mains	£m	3	16.880	3.006	19.886			19.886
21	Service reservoirs and water towers	£m	3		3.143	3.143			3.143
22	Pumping stations	£m	3		1.059	1.059			1.059
23	Water management and general	£m	3	1.562	2.854	4.417			4.417
24	Sewerage	£m	3				5.657	0.171	5.828
25	Sea outfalls and headworks	£m	3				0.003	0.008	0.011
26	Sewage treatment works	£m	3					15.577	15.577
27	Sludge treatment works	£m	3					0.095	0.095
28	Sludge disposal	£m	3				0.000	0.025	0.025
29	In-line pumping stations	£m	3					3.802	3.802
30	Terminal pumping stations	£m	3					0.355	0.355
31	Sewerage management and general	£m	3				0.392	1.366	1.758
32	Total infrastructure renewals (Base)	£m	3	18.768		18.768	6.053		24.820
33	Total non-infrastructure expenditure (Base)	£m	3		14.756	14.756		21.400	36.156
34	Total expenditure (Base service provision)	£m	3	18.768	14.756	33.524	6.053	21.400	60.976

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 2010/11 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 £113k.

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) and wastewater treatment works in order to maintain the serviceability of the asset base for customers.

The Capital Investment Driver Allocation methodology has changed in 2010/11 to reflect 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 10/11 reporting. Expenditure in these two areas has been separately identified within Asset Management Directorate expenditure in 10/11 and is not confused with the resultant delivery projects managed within Engineering Procurement Directorate. 2010/11 is the last year in which the same project code will be used for the Study stage and subsequent project delivery.

Sewer adoptions paid by third parties of £44.732m are included in column 4, line 7 of Table 32 within Sewerage infrastructure enhancements. Sewerage Pumping Stations paid by third parties of £1.505m are included in Col 5, line 12 within Sewerage non infrastructure enhancements.

The primary reasons for the significant increase in the Asset Adoptions in 2010/11 are 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 (a) reviewing old sites and (b) working with DRD Roads Service to clear a number of outstanding sites.
- Within the sites adopted has been a higher than usual number of sewerage pumping stations.

The calculation of gross asset valuation for adopted sewerage assets is based on the unit costs derived for PC10 which was indexed to 10/11 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 £208.380m (net of grants and contributions on infrastructure maintenance expenditure which totalled £76k and inclusive of sewerage adoptions), £60.976m (29%) related to base service position. This is consistent with the % of base maintenance on the last year of the SBP. However, considering the % of expenditure on sewer adoptions being greater in 2010/11 the Base Maintenance % is still increasing as a % of the total Capital expenditure programme.

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. Grants and contributions (Infrastructure Charges) have been apportioned 56% IRE and 44% MNI for both Water and Sewerage for 2010/11 reporting. The apportionment has been derived from the PC10 predictions.

Reconciliation between Table 32, 35 and 36

Table 32 - Line 17 + Line 34 in col 7	<u>£208.380m</u>
Table 35 – line 28 col 4	£ 73.876m
Table 36 – line 25 col 4	£ 88.267m
Assets adopted at nil cost	<u>£ 46.237m</u>
Reconciliation total	<u>£208.380m</u>

Reporter recommendations (AIR10)

(Page 1 para 2 of Reporter's Report)

The Reporter commented that Base allocations and generally under allocated and recommended further training and correction of allocations. The company has continued to train internal staff and Capital Work Programme consultants have been trained during the year.

(Page 2 Table of Reporter's report)

The Reporter had made recommendations for a number of changes to CIDA allocations which reflected the general low allocation of Base Service

Provision. The company has accepted these recommendations and adjusted the CIDA allocations on the basis of the Engineering logic associated with replacing assets but is now concerned that NI Water has not been funded in PC10 to deliver 'new trunk mains' and 'new sewerage pumping mains' out of the IRE allocation. This has arisen given that non infra assets are being replaced (i.e. Base) with infra assets with Water Treatment works becoming Trunk Mains and Wastewater Treatment Works becoming Sewerage pumping mains. This is discussed further in Chapter 35a and Chapter 36a.

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 2010	Per PC10 2010-11	Actual 10-11		As per SBP (2007-10)	As at 31 March 2010	Per PC10 2010-11	Actual 10-11		As per SBP (2007-10)	As at 31 March 2010	Per PC10 2010-11	Actual 10-11			
A DEPRECIATION CHARGE FOR THE YEAR																			
1	CCD as at 31 March 2010	£m	3	95.838	102.89			96.796	126.442				192.634	229.332					
2	CCD on additions (enhancement assets) post 1 April 2010	£m	3			0.192	B3				1.506	B3			8.383	1.698	B3		
3	CCD on additions (MNI assets) post 1 April 2010	£m	3			0.243	B3				0.902	B3			6.349	1.145	B3		
4	Total depreciation charge for the year	£m	3			0.435	B3				2.408	B3			14.732	2.843	B3		
5	Total depreciation charge	£m	3	95.838	102.89		41.613	B3	96.796	126.442		87.103	B3	192.634	229.332		14.732	128.716	B3
B INFRASTRUCTURE RENEWALS CHARGES, EXPENDITURE AND PROVISION																			
6	Infrastructure renewals expenditure	£m	3	69.105	79.215	19.017	18.844	B2	35.019	24.288	10.376	6.053	B2	104.124	103.503	29.393	24.897	B2	
7	Infrastructure renewals charges	£m	3	85.962	76.948	19.017	19.017	C5	28.535	26.622	10.376	10.376	C5	114.497	103.57	29.393	29.393	C5	
8	Infrastructure renewals prepayment/ (accrual)	£m	3	-16.857	2.267	2.267	2.094	C5	6.484	-2.334	-2.334	-6.657	C5	-10.373	-0.067	-0.067	-4.563	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	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 2010	Per PC10 2010-11	Actual 10-11		As per SBP (2007-10)	As at 31 March 2010	Per PC10 2010-11	Actual 10-11		As per SBP (2007-10)	As at 31 March 2010	Per PC10 2010-11	Actual 10-11	
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			
2	CCD on additions (enhancement assets) post 1 April 2010	£m	3			0.192	B3				1.506	B3				1.698	B3
3	CCD on additions (MNI assets) post 1 April 2010	£m	3			0.253	B3				0.902	B3				1.155	B3
4	Total depreciation charge for the year	£m	3			0.445	B3				2.408	B3			18.396	2.853	B3
5	Total depreciation charge	£m	3	100.241	107.293	45.044	B3	96.796	126.442		87.103	B3	197.037	233.735	18.396	132.147	B3
B INFRASTRUCTURE RENEWALS CHARGES, EXPENDITURE AND PROVISION																	
6	Infrastructure renewals expenditure	£m	3	69.105	84.139	19.017	18.844	35.019	24.288	10.376	6.053	B2	104.124	108.427	29.393	24.897	B2
7	Infrastructure renewals charges	£m	3	85.962	80.353	19.017	19.017	28.535	26.622	10.376	10.376	C5	114.497	106.975	29.393	29.393	C5
8	Infrastructure renewals prepayment/ (accrual)	£m	3	-16.857	3.786	3.786	3.613	6.484	-2.334	-2.334	-6.657	C5	-10.373	1.452	1.452	-3.044	C5

Table 33 – Depreciation Charge by Asset Type & Infrastructure Renewals Charge

Commentary and Methodology

Methodology

Current Cost Depreciation (CCD) Charge

The depreciation charge for the year has been populated using the same methodology used to populate Table 25. Current cost depreciation was calculated using the Fixed Asset Register (Real Asset Management). The Fixed Asset Register holds two sets of books (HCA and CCA books) which calculate depreciation using different gross book value (GBV) and gross current replacement cost (GCRC) figures. The CCA books have been used for both Table 25 and Table 33.

The final depreciation report from the CCA book was then analysed to each of their respective asset categories and service activities to identify the water and sewerage services. The management and general service activity could not be readily identified as water and sewerage services and have used the following percentages split as per IFM: Water 41% and Sewerage 59%.

Columns 3, 4, 7 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).

With respect to Confidence Grades this is reported as B3. This is applied given the close link with the CIDA allocations data source which has been reported as B3 in the capital expenditure tables 35 and 36.

Assets to be decommissioned or written off result in accelerated depreciation in the year. Assets with a NCRC of £22,734,159 were decommissioned in 2010/2011 – the corresponding accelerated depreciation is included in Table 33.

There are three main PPP Projects – Alpha, Omega and Kinnegar. When these projects were established each was examined to determine whether the risks and rewards were transferred to the provider or remained with NIW. Findings are as follows:

Alpha Project - for Alpha it was determined that the risks and rewards remained with NIW and therefore the assets were owned by the company and should be capitalised and depreciated. An associated finance lease should also be established with an initial liability equivalent to the value of the assets capitalised.

Omega and Kinnegar Projects – it was determined that in both cases the risks and rewards were transferred to the operator and thus the assets would not be capitalised and all charges would be debited to the P&L as incurred. However an element of these charges would be credited from P&L to Balance Sheet to establish a residual interest asset since ultimately the assets would come back into NIW ownership and would have a residual value at this time. These residual assets would not be depreciated during the life of the contracts.

During the year, there were on-balance sheet additions to the Alpha PPP assets. Therefore, there was an element of depreciation, £3.966m, (2010: £3.247m) in the table relating to PPP assets. This is separately identified in the second table for PPP only.

The asset lives used in calculating depreciation are consistent with those that have been used to populate Table 34. The asset lives used to calculate depreciation in the Fixed Asset Register are the same in both the HCA and CCA books.

Table 33 has also been adjusted to include only the appointed business and exclude the unappointed business relating to vehicle maintenance carried out for third parties. The depreciation charge (£118k) relating to this has been adjusted through Water Services – CCD on MNI assets. This is the only adjustment made in populating Table 33.

There were 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. NI Water plans to address this limitation by preparing the next AMP which is planned to report in 2013.

There were no MEA revaluations during the year and therefore no impact on CCD charge in the year.

During the year, decommissioned assets with a net current replacement cost (NCRC) of £22,734,159 were included within the current year depreciation charge.

	Water (10/11)	Sewerage (10/11)	Total (10/11)
CC Depreciation in year	£ 35,553,559.56	£ 52,299,423.45	£ 87,852,983.01
Accelerated Depreciation	£ 525,060.49	£ 22,209,098.92	£ 22,734,159.41
Impairment 10/11	£ 8,965,229.24	£ 12,594,463.32	£ 21,559,692.56
Total (2010/2011)	£ 45,043,849.29	£ 87,102,985.69	£132,146,834.98

	Water (09/10)	Sewerage (09/10)	Total (09/10)
CC Depreciation in year	£ 33,823,140.54	£ 44,071,083.58	£ 77,894,224.12
Accelerated Depreciation	£ 12,288,392.88	£ 6,021,518.52	£ 18,309,911.40
Total (2009/2010)	£ 46,111,533.42	£ 50,092,602.10	£ 96,204,135.52

The depreciation charge for 10/11 (£132,147k) is £35,943k greater than 09/10 (£96,204k). The majority of the increase is explained by the trend in recent years of higher spending on the capital programme. This resulted in the depreciation charge increasing by £20,019k from 08/09 to 09/10. The increased spending on the capital programme continued in 09/10 resulting in the higher 10/11 depreciation charge. Part of the overall increase is explained by a £4,424k increase in accelerated depreciation relating to decommissioned assets. This was the result of an extensive fixed asset register cleansing exercise carried out during the year. There was also an impairment of £21.560m during the year which went through the depreciation line. Also, 10/11 included a full year's depreciation (£3,965k) of the Alpha PPP asset which was £718k higher than the previous year.

Infrastructure Renewals Accounting

The IRC calculation for 10/11 is based on the final determination arising from PC10. The Regulator determined that the IRC and IRE will be the same for the three period of PC10. The projected IRE forms part of the PC10 capital expenditure plans.

The difference between the actual out-turn IRE and the IRC is treated as an accrual or prepayment.

2010-2011 IRC

The IRC for 2010-11 based on PC10 can be summarised as follows:

Water	- £19.017m
Sewerage	- £10.376m
Total	- £29.393m

The out-turn IRE for 2010-2011 can be shown as follows:

Water	- £18.844m
Sewerage	- £6.053m
Total	- £24.897m

The prepayment /accrual at 31 March 2011 can be shown as follows:

	W TOTAL £m	S TOTAL £m	Total TOTAL £m
IRE	19.017	10.376	29.393
IRC	18.844	6.053	24.897
In year prepayment / (accrual)	(0.173)	(4.323)	(4.496)
c/f prepayment / (accrual)	3.786	(2.334)	1.452
Cumulative prepayment / (accrual)	3.613	(6.657)	(3.044)

At the end of the year to 31 March 2011 an accrual balance of (£3.044m) was evident. This balance arose as the in year accrual of (£4.496m) for 2010-11 was added to the cumulative brought forward prepayment balance of £1.452m, which existed at the end of the three year SBP period ended 31st March 2010.

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 accrual will be monitored to ensure that the level of IRC charged in the future to the profit and loss account is appropriate given actual levels of IRE.

PPP

Alpha PPP has not given rise to any IRE for this year and therefore no IRC has been allocated to the PPP services.

The SBP and 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.

The Statutory accounts are prepared under IFRS and infrastructure renewals accounting is not applied. Infrastructure depreciation is charged in the statutory accounts and the value of this differs from the IRC in the regulatory accounts.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 34 FINANCIAL MEASURES (CURRENT COST ACCOUNTING)
ANALYSIS OF NON-INFRASTRUCTURE FIXED ASSET ADDITIONS BY LIFE CATEGORIES (NI WATER ONLY)

DESCRIPTION	UNITS	DP	1	2	3	4	CG	5	6	7	8	CG	
			WATER SERVICE					SEWERAGE SERVICE					
			2007-08	2008-09	2009-10	Report Year 2010-11		2007-08	2008-09	2009-10	Report Year 2010-11		
ACCOUNTING FIXED ASSET ADDITIONS													
NON-INFRASTRUCTURE ASSET ADDITIONS (ENHANCEMENT) BY ASSET LIFE													
A													
1	Very Short	£m	3	0.000	0.000	0.043	0.137	B3	0.000	0.000	0.033	0.194	B3
2	Short	£m	3	4.797	1.634	2.464	0.748	B2	6.206	7.319	5.465	2.598	B2
3	Medium	£m	3	2.146	4.310	7.203	3.465	B2	27.800	32.232	27.181	16.794	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	2.210	6.229	9.831	6.570	B2	32.290	41.759	35.558	22.160	B2
6	Land	£m	3	0.678	0.025	0.053	0.017	B3	3.406	0.495	0.244	0.095	B3
7	Land Disposals	£m	3	-0.199	-0.531	-0.061	-0.073	B2	-0.003	-0.001	-0.014	-0.005	B2
8	Total	£m	3	9.632	11.668	19.534	10.863	B2	69.700	81.804	68.467	41.836	B2
NON-INFRASTRUCTURE ASSET ADDITIONS (BASE SERVICE) BY ASSET LIFE													
B													
9	Very Short	£m	3	0.000	0.000	0.809	1.196	B2	0.000	0.000	0.000	0.590	n/a
10	Short	£m	3	11.578	5.291	3.568	0.489	B2	5.859	5.117	5.603	1.736	B2
11	Medium	£m	3	1.851	6.404	5.465	8.009	B2	6.460	12.370	13.966	10.492	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	5.928	7.728	2.451	5.061	B2	10.978	10.351	10.546	8.582	B2
14	Total	£m	3	19.356	19.423	12.293	14.756	B2	23.297	27.838	30.114	21.400	B2
NON-INFRASTRUCTURE ADDITIONS AVERAGE LIFE (YEARS)													
C													
15	Very Short	years	0	0	0	4	4	B3	0	0	4	4	B3
16	Short	years	0	10	10	10	10	B2	10	10	10	10	B2
17	Medium	years	0	20	20	20	20	B2	20	20	20	20	B2
18	Medium long	years	0	0	0	0	0	n/a	0	0	0	0	n/a
19	Long	years	0	60	60	60	60	B2	60	60	60	60	B2

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 34 FINANCIAL MEASURES (CURRENT COST ACCOUNTING)
ANALYSIS OF NON-INFRASTRUCTURE FIXED ASSET ADDITIONS BY LIFE CATEGORIES - PPP

DESCRIPTION	UNITS	DP	1	2	3	4	CG	5	6	7	8	CG	
			WATER SERVICE					SEWERAGE SERVICE					
			2007-08	2008-09	2009-10	Report Year 2010-11		2007-08	2008-09	2009-10	Report Year 2010-11		
ACCOUNTING FIXED ASSET ADDITIONS													
NON-INFRASTRUCTURE ASSET ADDITIONS (ENHANCEMENT) BY ASSET LIFE													
A													
1	Very Short	£m	3	N/C	0.000	0.000	0.000	n/a	N/C	0.000	0.000	0.000	n/a
2	Short	£m	3	N/C	0.000	0.000	0.000	n/a	N/C	0.000	0.000	0.000	n/a
3	Medium	£m	3	N/C	48.389	0.000	0.000	n/a	N/C	0.000	0.000	0.000	n/a
4	Medium long	£m	3	N/C	0.000	0.000	0.000	n/a	N/C	0.000	0.000	0.000	n/a
5	Long	£m	3	N/C	41.361	0.000	0.000	n/a	N/C	0.000	0.000	0.000	n/a
6	Land	£m	3	N/C	0.000	0.000	0.000	n/a	N/C	0.000	0.000	0.000	n/a
7	Land Disposals	£m	3	N/C	0.000	0.000	0.000	n/a	N/C	0.000	0.000	0.000	n/a
8	Total	£m	3	N/C	89.750	0.000	0.000	n/a	N/C	0.000	0.000	0.000	n/a
NON-INFRASTRUCTURE ASSET ADDITIONS (BASE SERVICE) BY ASSET LIFE													
B													
9	Very Short	£m	3	N/C	0.000	0.000	0.000	n/a	N/C	0.000	0.000	0.000	n/a
10	Short	£m	3	N/C	0.000	0.000	0.000	n/a	N/C	0.000	0.000	0.000	n/a
11	Medium	£m	3	N/C	0.137	0.099	0.050	B3	N/C	0.000	0.000	0.000	n/a
12	Medium long	£m	3	N/C	0.000	0.000	0.000	n/a	N/C	0.000	0.000	0.000	n/a
13	Long	£m	3	N/C	0.117	0.125	0.063	B3	N/C	0.000	0.000	0.000	n/a
14	Total	£m	3	N/C	0.254	0.224	0.113	B3	N/C	0.000	0.000	0.000	n/a
NON-INFRASTRUCTURE ADDITIONS AVERAGE LIFE (YEARS)													
C													
15	Very Short	years	0	0	0	0	0	n/a	0	0	n/a	n/a	
16	Short	years	0	10	10	10	10	n/a	10	10	n/a	n/a	
17	Medium	years	0	20	20	20	20	B3	20	20	n/a	n/a	
18	Medium long	years	0	0	0	0	0	n/a	0	0	n/a	n/a	
19	Long	years	0	60	60	60	60	B3	60	60	n/a	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 year. Feedback from these sessions has been very positive.

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 2010/11 against each project, excluding land acquisition, with a full CIDA output.
 - CIDA lands – this reports the accrual in 2010/11 against land acquisition and the associated CIDA output.
- b) CWP AIR reporting Model – The model developed in Excel for AIR09 and AIR 10 reporting has been adopted for AIR 11 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.

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 Setup 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 2010/11. It is worth noting that the above expenditure will also be managed on a new system referred to as CPMR with a first introduction in 2011/12. This system applies the same governance and controls to all capital expenditure in a similar way that EP spend was controlled on CAPTRAX.

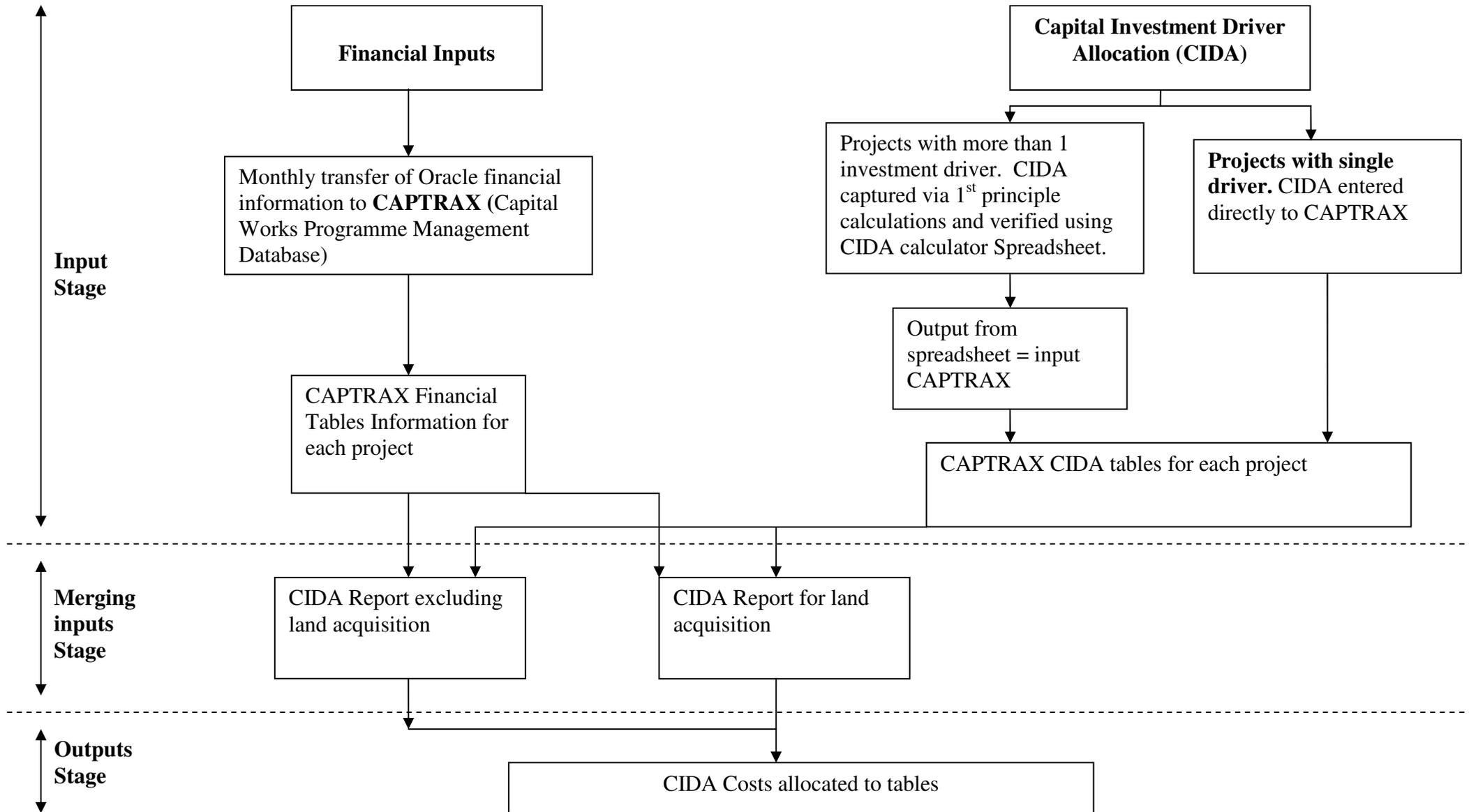
This information has been analysed separately from the CWP and merged on the final output tables.

Table population

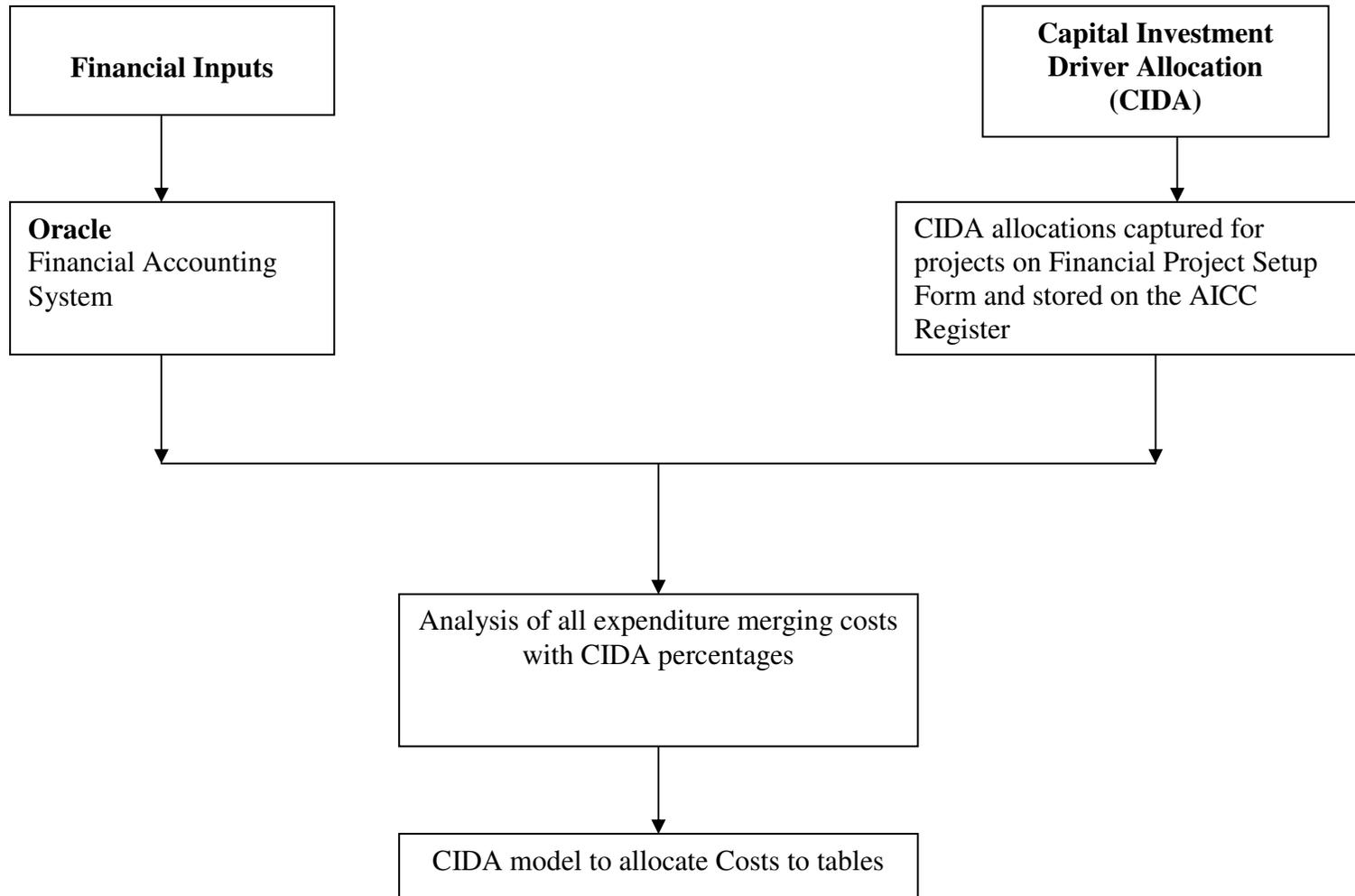
Data used in the population of the table is based on data extracted from the company's core systems and no assumptions are made in the allocation of project expenditure to the lines in the tables for all the expenditure with CIDA directly attributed. For the small rounding figure of £-12k of CWP expenditure (due to CAPTRAX 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. NIW are currently developing systems that a full review of asset lives can be completed in the future.

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 AIR10 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. NIW are currently developing systems so that a review of asset lives can be completed in the future, which is anticipated to take place for PC13.

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 £0.113m on this table relates to the Capital Maintenance element of PPP Alpha expenditure for 2010/11. The £0.113m 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.

Reporter Recommendations

NIW has not received any feedback to the comments for block C from the Utility Regulator during the year. These lines are populated on the same basis as AIR 10.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 35 FINANCIAL MEASURES
WATER SERVICE - EXPENDITURE BY PURPOSE (NIW ONLY)

DESCRIPTION	UNITS	DP	1		2		3		4		
			REPORTING YEAR	CG	REPORTING YEAR	CG	REPORTING YEAR	CG	REPORTING YEAR	CG	
			2007-08		2008-09		2009-10		2010-11		
A BASE SERVICE PROVISION											
1	Base operating expenditure	£m	3	95.308	B4	98.446		71.455	B4	87.100	B4
2	Infrastructure renewals expenditure (net)	£m	3	19.778	B3	32.534	B3	26.904	B3	18.768	B3
3	MNI (gross of grants and contributions)	£m	3	19.356	B3	19.423	B3	12.305	B3	14.756	B3
4	MNI - grants and contributions	£m	3	0.000		0.000		0.000	n/a	0.000	n/a
5	MNI - net of grants and contributions	£m	3	19.356	B3	19.423	B3	12.305	B3	14.756	B3
6	Infrastructure renewals expenditure (gross)	£m	3	19.778		32.534	B3	26.896	B3	18.844	B3
B QUALITY ENHANCEMENTS											
7	Capex: Total quality enhancement programme	£m	3	15.714	B3	19.076	B3	19.704	B3	10.775	B3
8	Opex: Total quality enhancement programme	£m	3	0.050	B4	0.053	B4	0.307	B4	0.016	B4
C ENHANCED SERVICE LEVELS											
9	Capital expenditure - customer service	£m	3	5.930	B3	2.949	B3	13.452	B3	4.395	B3
10	Additional operating expenditure - customer service	£m	3	0.000	B4	0.000	B4	0.000	B4	0.018	B4
D MAINTAINING AND IMPROVING SUPPLY/DEMAND BALANCE											
11	Capital expenditure supply/demand balance	£m	3	18.069	B3	10.963	B3	12.194	B3	14.934	B3
12	Capex - new development	£m	3	17.758	B3	4.824	B3	11.485	B3	14.517	B3
13	Capex - growth	£m	3	0.311	B3	6.139	B3	0.709	B3	0.417	B3
14	Capex - free meter "selective and optants"	£m	3	0.000	B3	0.000	B3	0.000	B3	0.000	B3
15	Additional operating expenditure supply/demand balance	£m	3	0.000	B4	0.000	B4	0.000	B4	0.000	B4
16	Capital expenditure - security of supply	£m	3	1.541	B3	24.095	B3	16.996	B3	10.248	B3
17	Additional operating expenditure - security of supply	£m	3	0.000	B4	0.000	B4	0.000	B4	0.015	B4
E NEW OUTPUTS/OBLIGATIONS SINCE THE SBP											
18	New outputs/obligations - capex	£m	3	0.000	B3	0.000	B3	0.000	B3	0.000	B3
19	New outputs/obligations - opex	£m	3	0.000	B4	0.000	B4	0.000	B4	0.000	B4
F GRANTS, CAPITAL CONTRIBUTIONS AND INFRASTRUCTURE CHARGES RECEIPTS FOR NEW CONNECTIONS											
20	Infrastructure charge receipts - new connections	£m	3	1.486		1.584		1.230	A2	1.419	A2
21	Enhancement requisitions, grants and contributions	£m	3	2.504		2.763		2.995	A2	2.211	A2
G ADOPTED ASSETS, NIL COST ASSETS											
22	Assets adopted or acquired at nil cost	£m	3	0.000		0.000	n/a	0.000	n/a	0.000	n/a
23	Adopted assets in return for a payment	£m	3	0.000		0.000	n/a	0.000	n/a	0.000	n/a
H EXPENDITURE TOTALS											
24	Total operating expenditure (total)	£m	3	95.358		98.499		71.762	n/a	87.148	n/a
25	Infrastructure renewals expenditure (net) (NIW only)	£m	3	19.778	B3	32.534	B3	26.904	B3	18.768	B3
26	Total asset additions (NIW only)	£m	3	60.611	B3	76.506	B3	74.651	B3	55.108	B3
27	Total enhancement capital contributions (NIW only)	£m	3	3.990	B3	4.347	B3	4.225	B3	3.630	B3
28	Total capital expenditure (excl. adopted and nil cost assets) (NIW only)	£m	3	80.389	B3	109.040	B3	101.554	B3	73.876	B3
I Capital element of PPP unitary charge payment											
29	Base maintenance (infrastructure and non-infrastructure)	£m	3					0.224	n/a	0.113	n/a
30	Quality enhancement expenditure	£m	3					0.000	n/a	0.000	n/a
31	Enhanced service level expenditure	£m	3					0.000	n/a	0.000	n/a
32	Supply demand balance expenditure	£m	3					0.000	n/a	0.000	n/a
33	New outputs/obligations since the SBP	£m	3					0.000	n/a	0.000	n/a
34	Total capital element of PPP unitary charge payment	£m	3					0.224	n/a	0.113	n/a

Table 35 - Water service – Expenditure by purpose**Capital expenditure (Capex)**

In 2010/11 NIW invested £73.876m, 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 2010/11 NIW invested £18.768m (net) in water service infrastructure renewals. By delivering this investment the company has:

- Renewed 174km of mains (including mains renewed for ENHANCEMENT)
- Replaced 3156 communication pipes (not including lead replacement).

In 2010/11 there is a difference in the IRE (net) and IRE (gross) of £0.076m which relates to income received for watermain diversions.

Capex: base service provision-maintenance non-infrastructure (NIW)

In 2010/11 NIW invested £14.756m (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 is the main highlight in this area for 2010/11. Ten reservoirs and water towers have been refurbished in 2010/11.
- Invested in Management and General activities (water), to maintain non-operational assets including improvements to IT systems.
- Invested £4.5m in Water Treatment works upgrades. The main sites included in this investment are Lough Bradan WTW, and Carmoney WTW

Serviceability

The compliance level for drinking water quality, leaving our water treatment works, during 2010, outturned at 99.99%. This is an improvement on the 2009 figure of 99.92% and is considered to be an excellent outturn. Trihalomethane and Aluminium compliance have continuously improved as the capital works programme progresses.

Expenditure to reduce leakage

Operational expenditure in the Leakage function in 2010/11 was £4.633m

The following table shows the breakdown of expenditure in the Leakage function in 2010/11.

Table 1 – Leakage expenditure

Expenditure category (£m outturn prices)	2010/11 £m
Total Capex	3.325
Total Opex	4.633
Total Expenditure	7.958

This expenditure includes £0.29m Business Improvement Capital expenditure.

The allocations for Leakage expenditure in 2010/11 are in accordance with the PC10 Final Determination Annex N.

Capex: quality enhancements (NIW)

In 2010/11 NIW invested £10.8m 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.
- Completed work at the following WTW sites as part of the quality improvement programme agreed with DWI as part of PC10
 1. Carmoney WTW
 2. Lough Bradan WTW

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 2010/11 NIW invested £10.2m providing security of supply projects and £0.4m 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.

In 2010/11 NIW also invested £14.9m in water services supply/demand programme relating to new development (provision on new supplies/connections). In doing so it has:

- Connected 5032 new properties; (4748, household and 284 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 2010/11 £18k 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 2010/11.

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 2010/11. 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 database 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.

It should be noted that the Opex from Capex number reported in AIR11 is small. This is due to a number of factors but is mainly due to a more competitive tender price for power achieved during the year. This has resulted in reduced expenditure on many sites including those with new assets.

One of the Business Improvement projects (Cost to Serve) has become operational during the 2010/11 financial year. It is intended that in future years this Oracle module will be used to facilitate the reporting of Opex from Capex.

Lines 20 – 21 - Grants, capital contributions and infrastructure charge receipts for new connections

Line 20 - Infrastructure charge receipts – new connections of £1.419m in Line 20 represents the total gross receipts for 2010/11 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 (2010/11 = 43.63%) 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:

2009-2010	£m
Water connections	2.419
Requisitions	-0.208*
Total line 21	2.211

* over accrued in 2009/10

- Total asset additions – Check to Table 25 line 5 col 4. For AIR 11 the reported numbers in these two tables are as follows:
Table 25 – £55.017m
Table 35 - £55.108m

The difference in the above 2 figures is explained as follows:

- PPP Alpha capital maintenance of £113k is not included in Table 35
- £-68k included in Table 25 relates to Decapitalised projects in 10/11.
- The balance is £-136k which is a reconciling error that cannot be identified.

Confidence Grades –CIDA allocation has made further progress in 2010/11 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.

Reporter Recommendations (AIR 10)

The reporter recommended that Base Maintenance allocation should be increased on the Castor Bay to Dungannon Trunk Main. This project replaces a Water Treatment Works with a Trunk Main. Using Engineering principles the reporter had stated that the existing WTW asset cannot be ignored and as a result the project should have an increased Base Maintenance allocation. The company accepted this recommendation but is now concerned as the 'new Trunk Main' will use IRE funding which is not provided for in PC10. This has the potential to restrict the length of watermains replacement that can take place in PC10 within the funding envelope.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN - TABLE 35A FINANCIAL MEASURES
WATER SERVICE - EXPENDITURE BY PURPOSE**

RPI Inflatior (Operating Expenditure) base year to report year prices
COPI Inflatior (Capital Expenditure) base year to report year prices

1.083
0.910

DESCRIPTION	UNITS	DP	1	2	3	4	5	
			PC10 PROJECTIONS FOR 2010-11	PC10 PROJECTIONS UPLIFTED FOR RPI AND COPI	ACTUAL 2010-11 OUTTURN	DIFFERENCE FROM PC10 FIGURES	% DIFFERENCE FROM PC10 FIGURES	DP
A BASE SERVICE PROVISION								
1	Base operating expenditure	£m	3	79.561	86.159	87.100	0.940	1.09
2	Infrastructure renewals expenditure (net)	£m	3	19.017	17.304	18.768	1.464	8.46
3	MNI (gross of grants and contributions)	£m	3	21.331	19.410	14.756	-4.654	-23.98
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	21.331	19.410	14.756	-4.654	-23.98
B QUALITY ENHANCEMENTS								
6	Capex - total quality enhancement programme	£m	3	10.498	9.552	10.775	1.222	12.80
7	Opex - total quality enhancement programme	£m	3	0.076	0.083	0.016	-0.067	-80.58
C ENHANCED SERVICE LEVELS								
8	Capital expenditure - customer service	£m	3	5.907	5.375	4.395	-0.979	-18.22
9	Additional operating expenditure - customer service	£m	3	0.260	0.282	0.018	-0.264	-93.73
D MAINTAINING AND IMPROVING SUPPLY/DEMAND BALANCE								
10	Capital expenditure supply/demand balance	£m	3	20.500	18.654	25.182	6.528	35.00
11	Total enhancement capital contributions	£m	3	2.120	1.929	3.630	1.701	88.17
12	Capex net of enhancement capital contributions	£m	3	18.380	16.725	21.552	4.827	28.86
13	Additional operating expenditure supply/demand balance	£m	3	0.071	0.077	0.015	-0.063	-81.03
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	77.253	70.295	73.876	3.581	5.09
17	Total opex excluding new outputs	£m	3	79.969	86.601	87.148	0.547	0.63
18	Total gross capex - gross of grants (ire net) and including new outputs	£m	3	77.253	70.295	73.876	3.581	5.09
19	Total opex including new outputs	£m	3	79.969	86.601	87.148	0.547	0.63

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), 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 to meet the large spend requirement in that single year. 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.
- **Governance Changes** - NIW has seen substantial and continuous changes in capital spend governance during the 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 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 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

- **Reduced Capital Efficiency** – NIW has begun the procurement process for a series of major frameworks to replace extant and expired frameworks within the Capital Works Programme. 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.
- **Weather delays (CWP)** - In December 2010 NIW projected a very considerable reduction £14m in capital works programme (CWP) expenditure due to the impact of the extreme cold at the start of December. This projection was an essential part of the **November 2010 monitoring round**, to provide certainty of CAPEX expenditure, so a total of £17m relating to the CWP was returned (including £3m of reductions due to delays in procurement).

The long range forecast projected continuing bad weather and NIW was conservative in the estimate of the delivery of investment in 2010/11. In early January this conservative approach seemed justified, with bad weather and diversion of NIW staff and contractors to repairing frost damage. In mid January the weather improved dramatically, with lower rainfall and higher temperatures which allowed the affected programmes to accelerate delivery.

This resulted in a slight overspend within the Capital Works Programme based on the Q3 forecast.

- **Freeze/Thaw Christmas 2010** -The major operational issues from 26th December 2010 for 2 weeks had a limited effect on the immediate capital expenditure.

NIW has identified a number of enhancements across the asset base to provide extra protection for assets against freezing weather and these will be taken forward in the appropriate capital route. NIW will also need to spend capital within the M&G programme on improved communication technology and incident planning.

Comparison issues

General Matters

The COPI factor of 0.91 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 last 3 years. This alone has the effect of reducing the PC10 capital from that assumed in 'PC10 Final Determination' by £6.96m for Water investment in 2010/11.

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 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. As outlined in our PC10 submission, we expected the Alliance delivery model to deliver a significant element of the challenging Capex efficiencies.

For the above reason NI Water have applied a conversion factor of 1 from 07/08 base year for 2010/11 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 2010/11 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 50.1% for 2010/11.

This line is showing expenditure in 2010/11 greater than the Final Determination. The main reason for this is the additional expenditure in year due to the Freeze/thaw in December 2010.

Line 2 – Infrastructure Renewals Expenditure (net)

This line is showing an increased expenditure in 2010/11 compared to PC10 FD projected expenditure in 2010/11 prices using actual COPI. This is primarily due to a change in CIDA allocation following the 'Reporter recommendations in AIR10'. 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 recommends 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 3% 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 significantly reduced spend from the PC10 allocation. The development of the Base Maintenance –Water (Non-infra) programme has progressed more slowly than anticipated. The Base Maintenance requirements for the WTW sites are progressing through the asset management process.

Line 7, 9 & 13 – OPEX from Capex

These lines are all showing reduced spend in 2010/11 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 not available. The numbers presented are primarily based on power requirements. Given that NIW obtained more competitive power tender rates in 2010/11 the Opex from Capex is showing small actual outturns compared to the PC10 projections.
- b) The OPEX from CAPEX shown within 2010/11 relates only to the Capital Works Programme. No M & G Opex from Capex is included in the 2010/11 actual figures. M & G Opex from Capex was never claimed during the SBP years and NI Water will consider how this can be derived for AIR12.

Line 6 - Capex - Total Quality Enhancement Programme

The quality enhancement (Q) programme spent more than the PC10 projection in 10/11. The variance of £1.2m additional spend in this programme is mainly attributed to additional quality spend on the Watermain Rehabilitation programme. The non infra spend is comparable to the FD.

Line 8 – Capital expenditure-customer service

Variance on this line is explained by 2 main variances as follows:

- In 2010/11 there has been c£1.7m (T40 analysis) additional expenditure on watermain rehabilitation (water infra) relating to expenditure on DG2 properties.
- The M & G Enhancement projects have suffered delays in 2010/11 and reduced spend from the FD by c£3.52m (T40 analysis) Some of this delay is associated to changes in procurement and governance processes.

Line 10 – Supply/ Demand Balance

It is difficult to analyse these lines separately. In summary there are 4 main variances as follows:

- c£6.1m (T40 analysis) additional has been spent on Trunk Watermains in 2010/11 which relates to the additional carryover of the Castor Bay to Dungannon Trunk Main project.
- c£0.7m (T40 analysis) additional spend on Reservoirs. There are variations on a number of the PC10 projects with some being advanced earlier and some being delayed.

- c-£4m (T40 analysis) reduced spend on SDB within the watermain rehab sub programme. This is the only area of the Watermain rehab programme that has been reduced leaving an overall reduction in the Watermain rehab programme of this magnitude in the 2010/11 year.
- c£3.5 (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 £70.3m in 10/11 prices. The actual expenditure was £73.9m.

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		
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG	
A BASE SERVICE PROVISION											
1	Base operating expenditure	£m	3	87.703	B4	107.531	B4	95.090	B4	71.339	B4
2	Infrastructure renewals expenditure (net)	£m	3	6.195	B3	6.600	B2	11.494	B3	6.053	B3
3	MNI (gross of grants and contributions)	£m	3	23.297	B3	27.838	B2	30.102	B3	21.400	B3
4	MNI - grants and contributions	£m	3	0.000		0.000	B2	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	21.400	B3
6	Infrastructure renewals expenditure (gross)	£m	3	6.195	B3	6.600	B2	11.494	B3	6.053	B3
B QUALITY ENHANCEMENTS											
7	Capex - total quality enhancement programme	£m	3	49.426	B3	79.419	B2	62.880	B3	29.753	B3
8	Opex - total quality enhancement programme	£m	3	0.096	B4	1.028	B4	1.413	B4	0.129	B4
C ENHANCED SERVICE LEVELS											
9	Capital expenditure - customer service	£m	3	49.691	B3	28.209	B2	20.002	B3	8.823	B3
10	Additional operating expenditure - customer service	£m	3	0.000	B4	0.044	B4	0.338	B4	0.002	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
12	Capex - new development	£m	3	19.875	B3	38.339	B3	28.642	B3	22.078	B3
13	Capex - growth - sewage	£m	3			5.834	B3	2.777	B3	0.157	B3
14	Capex - growth - sewage treatment	£m	3			0.057	B3	0.304	B3	0.003	B3
15	Additional operating expenditure supply/demand balance	£m	3	0.596	B4	0.489	B4	0.968	B4	0.099	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
17	New outputs/obligations - opex	£m	3	0.000	B4	0.000	B2	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
19	Enhancement requisitions, grants and contributions	£m	3	0.124		0.759	A2	1.253	A2	2.029	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
H EXPENDITURE TOTALS											
21	Total operating expenditure	£m	3	88.395		109.092	B2	97.808	n/a	71.569	n/a
22	Infrastructure renewals expenditure (net)	£m	3	6.195	B3	6.600	B2	11.494	B3	6.053	B3
23	Total asset additions	£m	3	187.560	B3	198.980	B2	163.529	B3	128.452	B3
24	Total enhancement capital contributions	£m	3	1.256	B3	1.923	B2	2.282	B3	3.182	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
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
27	Quality enhancement expenditure	£m	3					0.000	n/a	0.000	n/a
28	Enhanced service level expenditure	£m	3					0.000	n/a	0.000	n/a
29	Supply demand balance expenditure	£m	3					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
31	Total capital element of PPP unitary charge payment	£m	3					0.000	n/a	0.000	n/a

Table 36 - Sewerage Service – Expenditure by purpose**Capital expenditure (Capex)**

In 2010/11 NIW invested £88.3m (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 2010/11 NIW invested £6m (net) in sewerage service infrastructure renewals. In spending the 2010/11 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 2010/11 on both Critical and non-critical sewers in line with findings from the Drainage Area Studies.

Capex: base service provision – maintenance non- infrastructure

In 2010/11 NIW invested £21.4 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 £1.6 million in Management and General Activities to maintain non-operational assets.
- Commenced a focused programme of work specifically focused on Base Maintenance at WwTW sites.

Capex: quality enhancements

In 2010/11 NIW invested £29.8 million in sewerage service quality programmes. In doing so the company has:

- Completed 19 of wastewater treatment works as agreed PC10 nominated outputs and one additional SBP project (Darragh Cross WwTW) that was carried forward into PC10 without being listed. The nominated outputs are shown in table 1 with the PC10 reference number. It should be noted that 6 of the PC10 nominated outputs achieved beneficial use before the PC10 period commenced. However, these projects still required PC10 funding to ensure the projects were completed including siteworks with total spend in the year of £2.079m with the largest spend being on Milltown, Antrim WwTW of £1.033m. Given the magnitude of this project this is a reasonable amount of expenditure post beneficial use.

Table 1: WwTW Nominated outputs progress

Nominated outputs reference	NI Water project Code	Project title	Year beneficial use achieved
STW/003	KL393	Ballymonie WwTW	2010/11
STW/004	KR388	Ballywalter WwTW	SBP completion
STW/005	KC299	Bushmills and Portballintrae WwTW	2010/11
STW/006	KB333	Cargan WwTW	2010/11
STW/007	KC284	Cloughmills WwTW	2010/11
STW/008	KB284	Coagh WwTW	2010/11
STW/009	KF005	Coalisland WwTW	2010/11
STW/010	KS224	Downpatrick WwTW	2010/11
STW/012	KP299	Enniskillen WwTW	SBP completion
STW/014	KT125	Hooks Corner WwTW	2010/11
STW/015	KR313	Lisbarnet WwTW	SBP Completion
STW/016	KS307	Loughries WwTW	2010/11
STW/017	KF064	Lurganare WwTW	2010/11
STW/018	KB281	Maghera WwTW	2010/11
STW/019	KB282	Magherafelt WwTW	2010/11
STW/020	KA158	Milltown Antrim WwTW	SBP completion
STW/021	KB278	Moneymore WwTW	2010/11
STW/022	KF012	Moygashel WwTW	SBP completion
STW/024	KR310	Newtownbreda WwTW	2010/11
STW/026	KN533	Rousky Sewerage Scheme	2010/11
STW/027	KS263	Saintfield WwTW	SBP completion
STW/028	KB279	Stewartstown WwTW	2010/11
STW/029	KB269	Toome (Creagh) Sewerage Scheme	2010/11
STW/031	KF320	Bush WwTW	2010/11

STW/038	KT377	New Holland WwTW	2010/11
Additional SBP - PC10 carryover	KS384	Darragh Cross WwTW	2010/11

Line 16 - Capex: New Obligations

There are no new obligations reported in 2010/11. 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**

There are no grants for IRE in 2010/11.

IRE related contributions would be those contributions from third parties towards work carried out on base sewerage projects.

Thus IRE gross and IRE net are the same -lines 2 and 6.

MNI

There are no contributions or grants for non infrastructure base projects in 2010/11.

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 2010/11. 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) has become operational during the 2010/11 financial year. This Oracle module has been used for the first time to capture the OPEX cost from the Small WwTW project and it is intended that this process will be used to report Opex from Capex in the future. This has been further interrogated to remove those sites where the supply has not been upgraded. Those sites that have had a new power connection have had 100% of the power costs included within Opex from Capex.

Pumping Stations cannot be identified individually in the General Ledger and where possible the same methodology as the small WWTW's has been used.

However there remain some pumping stations for which it has not been possible to separately identify power costs.

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.

Apportionment within the Table has been completed in accordance with CIDA apportionments to ENHANCEMENT. A separate database 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.

It should be noted that the OPEX from CAPEX number reported in AIR11 is small. This is due to a number of factors but mainly due to a more competitive tender price for power achieved during the year. This has resulted in reduced expenditure on many sites including those with new assets.

No M & G OPEX from CAPEX has been determined in AIR11. The OPEX from CAPEX reported to date in NI Water has only been focused on the Capital Works Programme. This has resulted in a further understatement of OPEX from CAPEX. This will be reviewed during 2011/12 in preparation for AIR12.

Grants, capital contributions and infrastructure charge receipts for new connections (lines)

Line 18 - Infrastructure charge receipts – new connections of £1.153m in Line 18 represents the total gross receipts for 2010/11 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 (2010/11 43.63%) 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:

2010/11	£m
Sewers for adoption – inspection fees	0.549
Requisitions	0.593
Sewerage connections	0.887
Total line 19	2.029

Confidence Grades – CIDA allocation has made further progress in 2010/11 and whilst it is accepted there may 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 10 the reported numbers in these two tables are as follows:

Table 25 – £131.175m

Table 36 - £128.452m

The difference in the above 2 figures is explained as follows:

- a) £3.143m relates to the Residual interest on Kinnegar PPP project which is not included on Table 36.
- b) £-419k included in Table 25 relates to De-capitalised projects in 10/11. The balance is a small rounding error.

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

1.083

COPI Inflation (Capital Expenditure) base year to report year prices

0.910

DESCRIPTION	UNITS	DP	1	2	3	4	5
			PC10 PROJECTIONS FOR 2010-11	PC10 PROJECTIONS UPLIFTED FOR RPI AND COPI	ACTUAL 2010-11 OUTTURN	DIFFERENCE FROM PC10 FIGURES	% DIFFERENCE FROM PC10 FIGURES
						DP	DP 2
A BASE SERVICE PROVISION							
1 Base operating expenditure	£m	3	79.244	85.816	71.339	-14.477	-16.87
2 Infrastructure renewals expenditure (net)	£m	3	10.372	9.437	6.053	-3.385	-35.87
3 MNI (gross of grants and contributions)	£m	3	32.915	29.951	21.400	-8.550	-28.55
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	29.951	21.400	-8.550	-28.55
B QUALITY ENHANCEMENTS							
6 Capex: Total quality enhancement programme	£m	3	47.608	43.320	29.753	-13.567	-31.32
7 Opex: Total quality enhancement programme	£m	3	0.285	0.309	0.129	-0.180	-58.22
C ENHANCED SERVICE LEVELS							
8 Capital expenditure	£m	3	9.263	8.429	8.823	0.394	4.68
9 Additional operating expenditure - customer service	£m	3	0.260	0.282	0.002	-0.279	-99.16
D MAINTAINING SUPPLY/DEMAND BALANCE							
10 Capital expenditure supply/demand balance	£m	3	15.905	14.472	22.238	7.766	53.66
11 Total enhancement capital contributions	£m	3	1.027	0.934	3.182	2.248	240.61
12 Capex net of enhancement capital contributions	£m	3	14.878	13.538	19.056	5.518	40.76
13 Additional operating expenditure supply/demand balance	£m	3	0.060	0.065	0.099	0.034	51.85
E EXPENDITURE TOTALS							
14 Total gross capex - gross of grants (ire net) and excluding new outputs	£m	3	116.063	105.609	88.267	-17.342	-16.42
15 Total opex (excluding new outputs)	£m	3	79.849	86.471	71.569	-14.902	-17.23
16 Total gross capex - gross of grants (ire net) and including new outputs	£m	3	116.063	105.609	88.267	-17.342	-16.42
17 Total opex including new outputs	£m	3	79.849	86.471	71.569	-14.902	-17.23

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), 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 to meet the large spend requirement in that single year. 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.
- **Governance Changes** - NIW has seen substantial and continuous changes in capital spend governance during the 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 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

- **Reduced Capital Efficiency** – NIW has begun the procurement process for a series of major frameworks to replace extant and expired frameworks within the Capital Works Programme. This replaces the proposed Alliance delivery structure, which was adversely affected by the risks 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.
- **Weather delays (CWP)** - In December 2010 NIW projected a very considerable reduction £14m in capital works programme (CWP) expenditure due to the impact of the extreme cold at the start of December. This projection was an essential part of the **November 2010 monitoring round**, to provide certainty of CAPEX expenditure, so a total of £17m relating to the CWP was returned (including £3m of reductions due to delays in procurement).

The long range forecast projected continuing bad weather and NIW was conservative in the estimate of the delivery of investment in 2010/11. In early January this conservative approach seemed justified, with bad weather and diversion of NIW staff and contractors to repairing frost damage. In mid January the weather improved dramatically, with lower rainfall and higher temperatures which allowed the affected programmes to accelerate delivery. This resulted in a slight overspend within the Capital Works Programme based on the Q3 forecast.

- **Freeze/Thaw Christmas 2010** -The major operational issues from 26th December 2010 for 2 weeks had a limited effect on the immediate capital expenditure.

NIW has identified a number of enhancements across the asset base to provide extra protection for assets against freezing weather and these will be taken forward in the appropriate capital route. NIW will also need to spend capital within the M&G programme on improved communication technology and incident planning.

- **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.

In the year NIW were involved in negotiations with the Crown Estates, which affected a number of projects discharging to tidal waters. This has now been resolved, but affected Newcastle WwTW, Whitehead, Ballystruder, Ballycarry Treatment and UID projects discharging to tidal waters.

The PC10 programme was assessed on the immediate priority of each project, however the three year period does not allow sufficient time to address complex lands issues and still deliver the project.

Comparison issues

General Matters

The COPI factor of 0.91 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 last 3 years. This alone has the effect of reducing the PC10 capital from that assumed in 'PC10 Final Determination' by £10.45m for Sewerage investment in 10/11.

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 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. As

outlined in our PC10 submission, we expected the Alliance delivery model to deliver a significant element of the challenging Capex efficiencies.

For the above reason NI Water have applied a conversion factor of 1 from 07/08 base year for 2010/11 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 2010/11 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 49.9%.

This line is showing a reduced OPEX expenditure in 2010/11 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 2010/11 compared to PC10 FD projected expenditure in 2010/11 prices using actual COPI. This is due to programme delays in both the named sewerage and 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 recommends 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 3% 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)

This line reports a significantly reduced spend from the PC10 allocation. The development of the Base Maintenance –Sewerage (Non-infra) programme has progressed more slowly than anticipated. The Base Maintenance requirements for the WwTW sites are progressing through the asset management process.

Lines 7 & 9– OPEX from Capex

These lines are all showing reduced spend in 2010/11 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 the Opex from Capex is showing small actual outturns compared to the PC10 projections.
- b) The OPEX from CAPEX shown within 2010/11 relates to only the Capital Works Programme. No M & G Opex from Capex is included in the 2010/11 actual figures. M & G Opex from Capex was never claimed during the SBP years and NI Water will consider how this can be derived for AIR12. This item primarily explains the variance on line 9.
- 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.

Line 6 - Capex - Total Quality Enhancement Programme

The quality enhancement (Q) programme has spent less than the PC10 projection for 2010/11. This is due to a slower start on the Waste Water Treatment new starts but 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 variances are described as follows:

- The main sewerage programme has suffered delays and is showing a variance of c-£2.2m (T40 analysis). Given the pressures on PC10 funding for later years this delay is unlikely to be recovered in later years with the PC10 period with associated outputs being deferred into later years.
- A variance of c-£4.3m (T40 analysis) on Wastewater Carryover projects is primarily due to a shift in CIDA allocation to Supply Demand Balance. It should also be noted that there is a significant infra allocation (£1.4m) to Q in this programme based on pump away solutions which was not included in the PC10 Final Determination.
- A variance of c-£2.2m (T40 analysis) on Waterwater Treatment new starts relates to a delayed start 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.
- A variance of c-£2.5m (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. This sub programme spend more than the PC10 allocation for 2010/11 but c£5.1m (T40 analysis).
- The additional outputs programme is showing a small variance in Quality expenditure and this is again due to a CIDA allocation change from the PC10 Final Determination with additional expenditure in Base Maintenance and Supply Demand balance.

Line 8 – Capital expenditure-customer service

Variance on this line is explained by 2 main variances as follows:

- In 2010/11 there has been c£2.7m (T40 analysis) additional expenditure on Sewerage Maintenance, Flooding and DG5 relating to expenditure on DG5 properties.
- The M & G Enhancement projects have suffered delays in 2010/11 and reduced spend from the FD by c-£3.4m (T40 analysis) Some of this delay is associated to changes in procurement and governance processes.

Line 10– Supply/ Demand Balance

The main variances on this line are explained as follows:

- c£1.6m (T40 analysis) of additional spend on Wastewater Treatment Carryover projects. This is due to CIDA allocation change from the PC10 Final Determination.
- c£4.1m (T40 analysis) of additional spend on Small Wastewater Treatment projects. This is due to CIDA allocation change from the PC10 Final Determination.
- C£1.7m (T40 analysis) of additional spend on the additional outputs programme. This is primarily due to CIDA allocation change from the PC10 Final Determination

Line 13 – OPEX from Capex-Supply Demand Balance.

This line is showing an increase from the Final Determination numbers and this is due to additional Sewerage pumping stations having been adopted in 2010/11.

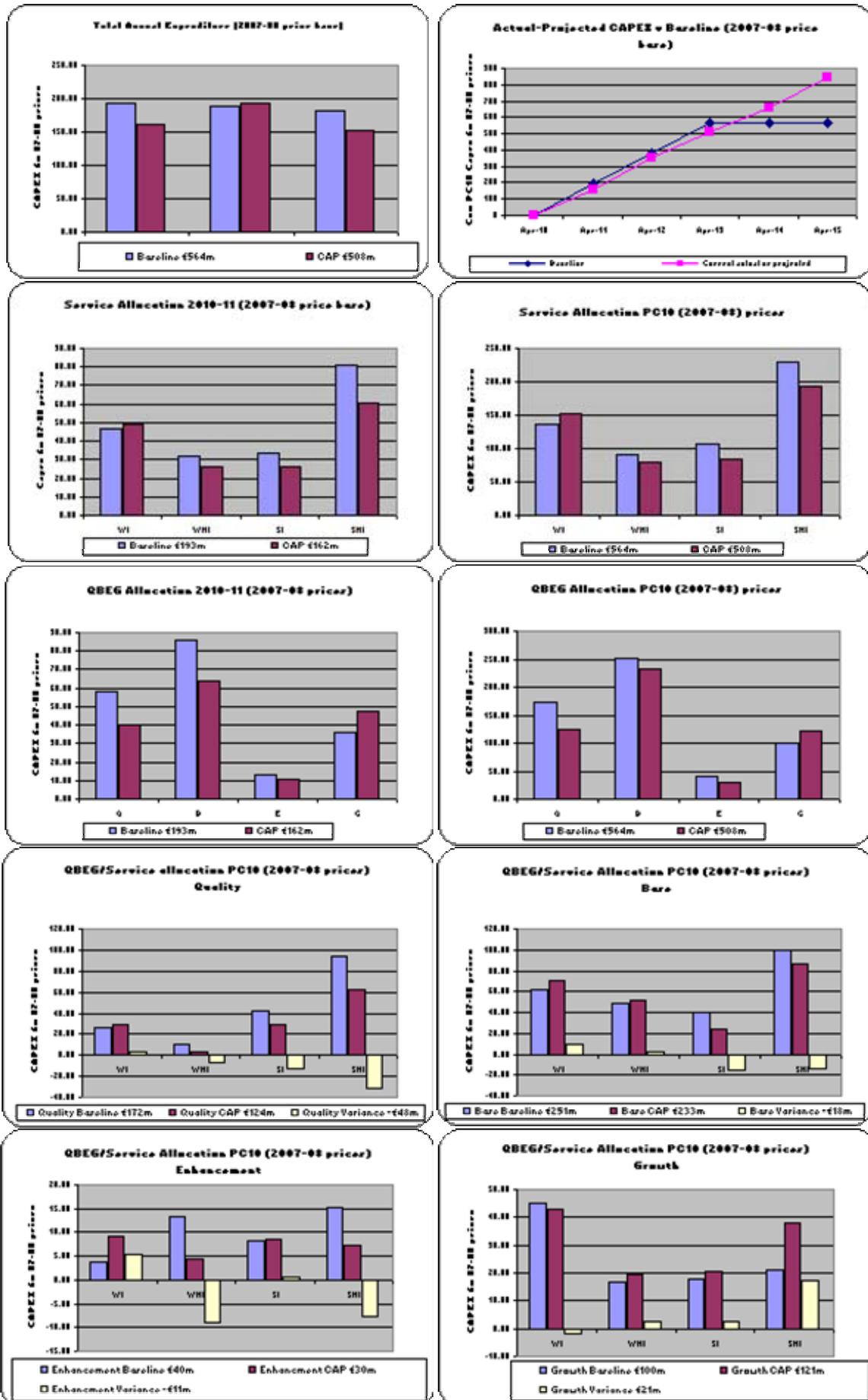
Line 16 - Total Gross Capex - Gross of Grants (IRE Net) and Excluding New Outputs

The total PC10 Water predicted expenditure as per the table is £105.6m in 10/11 prices. The actual expenditure was £88.3m.

Table 40 - Capital Investment Monitoring Return

Table 40 provides a detailed breakdown for the capital programme by individual projects or sub-programmes of work. The table records expenditure incurred in PC10 and provides the allocation of each project by service and purpose. Further commentary on the capital programme is provided against Tables 35 and 36.

Appendix 1: 2010-11 Q4 CIM return. Current Actual COPI = 1 as per MOU agreement.



NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

**ANNUAL INFORMATION RETURN- TABLE 41 KEY OUTPUTS
HEALTH & SAFETY INFORMATION (NIW only)**

DESCRIPTION	UNITS	DP	1		2		3		4	
			REPORTING YEAR		REPORTING YEAR		REPORTING YEAR		REPORTING YEAR	
			2007-08	CG	2008-09	CG	2009-10	CG	2010-11	CG
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
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
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
4 Number of incidents of occupational ill health	nr	0	172	A2	250	A2	147	A2	135	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
B RIDDOR REPORTS										
6 Total RIDDOR incidents	nr	0	16	A1	11	A1	11	A1	4	A1
7 RIDDOR - rate per 1000 employees	nr	2	9.54	A1	6.97	A1	7.93	A1	3.04	A1
8 3-day accident rate per 1000 employees	nr	2	9.54	A1	11.00	A1	7.93	A1	3.04	A1
9 Major/fatal accident rate per 1000 employees	nr	2	0.00	A1	6.97	A1	0.00	A1	0	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		N/C	
11 Total days lost due to sickness, accident and occupational ill health	nr	0	N/C		N/C		N/C		N/C	
12 Total days lost - rate per 1000 employees	nr	2	N/C		N/C		N/C		N/C	
13 Number of incidents of occupational ill health	nr	0	N/C		N/C		N/C		N/C	
14 Incidents of occupational ill health - rate per 1000 employees	nr	2	N/C		N/C		N/C		N/C	
D CONTRACTORS' RIDDOR REPORTS										
15 Total RIDDOR incidents	nr	0	N/C		N/C		7 + 1 (DO)	B2	7	B2
16 RIDDOR - rate per 1000 contractors' employees	nr	2	N/C		N/C		N/C		N/C	
17 3-day accident rate per 1000 contractors' employees	nr	0	N/C		N/C		N/C		N/C	
18 Major/fatal accident rate per 1000 contractors' employees	nr	2	N/C		N/C		0.00	A2	0	A2

Table 41 – Health and Safety Information**Lines 1- 5 - Lost Time due to Sickness and Accidents and Incidence of Occupational Ill Health**

The 2009/10 AIR report stated that NI Water had lost a total of 10,873 working days and achieved an attendance rate of 96.5%. However an analysis of a report extracted during October 2010 indicated that some absences were not being captured. This centred on those who had left the company during the financial year. A review of the 2009/10 report identified the same issue and the days lost were actually 12,948 with an attendance rate of 95.8%. A notification was issued to the Shareholder informing of the inaccurate attendance report.

In 2010/11 financial year NI Water lost a total of 9,953 working days due to sickness which was equivalent to 7.6 working days per employee. The KPI target for attendance in 10/11 was 96.5% and NI Water delivered an actual attendance rate of 96.6 %, 0.1% above the target, which is an increase of 0.8% on the 09/10 reviewed actual of 95.8%.

Restructuring continued during 2010/11 which resulted in 35 employees leaving through a voluntary early severance/retirement (VER/VS) package.

In December 2010 37 staff transferred under TUPE from Echo Customer Services provider to NI Water in addition to 3 from AON and 8 from Northgate in June and July 2010 which increased headcount. The Work Control Centre also appointed 16 permanent employees to replace temporary staff.

HR Advisors in conjunction with Line Managers continue to meet with staff members 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. The main reason for staff being absent with work related stress focused around the changes in working practices and restructuring.

Industrial employees 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 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 with 24 hours by line management. The new and independent electronic Risk Reporting System, capable of "tracking accidents" has now been fully in place since 1 April 2009.

It is the relevant Line Manager's responsibility to ensure all accident details are recorded on DATIX and also in the HSENI prescribed Accident Book.

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 only 4 RIDDOR reportable incidents within NIW in 2010/11 and all of these relate to more than 3-day accident-related absences.

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 1316. This gives the RIDDOR rate per 1000 employees as 3.04 for 2010/11.

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 2010/11.

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 2010/11, 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 2010/11 the total number of RIDDOR incidents reported to NIW by all of its contractors was 7. 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 5 RIDDOR accidents and 2 Dangerous Occurrences reported.

Lines 16 - 17 - RIDDOR Accidents

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 - Major/fatal accident rate per 1000 contractors’ 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 KEY OUTPUTS
PPP SCHEMES
REPORTING YEAR 2010-2011

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		Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Kinnegar	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Alpha	Kinnegar	Omega	Water	Sewerage	
2	Service Area	text	na	na		WT	WT	WT	WT	WD/WT	WD	WD	WWT	WWT	WWT	WWT	WWT	WWS	WWS	WWS	WWS	All	All	All	Service	Service		
3	Name of works	text	na	na		Balinrees	Castor Bay	Dunore Point	Moyola	DBFO LM & FKd BDG Cont	Ballymoney LM	Imavady LM	Kinnegar	Richhill	Armagh	Ballynacor	North Down	Ballynckard	Ballynacor Lagoons	Ballynacor	Duncrue	Sludge Service	Total	Total	Total	Total	Total	
4	Commencement date	date	na	na		10-Oct-08	09-Dec-08	11-Dec-08	16-Sep-08	16-Dec-08	15-Oct-08	15-Oct-08	24-May-01	08-Apr-09	27-Aug-09	14-Nov-09	05-May-08	20-Apr-09	N/A	31-Mar-10	31-Mar-10	31-Mar-10						
5	Service duration	yrs	0	na		23	23	23	23	23	N/A	N/A	23	23	23	22	24	23	N/A	22	22	22						
6	Service completion date	date	na	na		30-May-31	30-May-31	30-May-31	30-May-31	30-May-31	N/A	N/A	23-Apr-24	07-Mar-32	07-Mar-32	07-Mar-32	07-Mar-32	07-Mar-32	07-Mar-32	07-Mar-32	07-Mar-32	07-Mar-32						
B PAYMENT TO PPP CONCESSIONAIRE																												
7	Unitary Charge Capacity	£m	3	na																								
8	Unitary Charge Variable	£m	3	na																								
9	Unitary Charge Deductions	£m	3	na																								
10	Atypical expenditure	£m	3	na																								
11	Efficiency Gains included in 7-10	£m	3	na																								
12	Total PPP Payments (7 to 10)	£m	3	na	Sum 7 to 10																							
13	Capital repayment	£m	3	na																								
14	Maintenance	£m	3	na																								
15	Residual interest	£m	3	na																								
16	Atypical payments capitalised	£m	3	na																								
17	Total capitalised (13 to 16)	£m	3	na	Sum 13 to 16																							
18	Total PPP Expensed (12-17)	£m	3	na	Lines 12-17																							
19	Interest	£m	3	na																								
20	Total PPP Opex (18-19)	£m	3	na	Line 18-19																							
C WATER DISTRIBUTION DATA																												
21	Distribution input	Mld	2	B2	Table 10 Line 26	25.76	102.29	122.17	16.08														266.30			266.30		
21a	Water Treatment Works Capacity	Mld	0	A1		50.00	147.00	180.00	19.00																	396.00		
22	Length of mains	km	2	A2	Table 11 Line 12					16.42													16.42			16.42		
D WATER RESOURCE AND TREATMENT DATA																												
23	Turbidity 95%ile greater or equal to 0.5NTU	1/0	0	A3	Table 11a Line 1	0	0	0	0	0																		
24	Turbidity 95%ile less than 0.5NTU	1/0	0	A3	Table 11a Line 2	1	1	1	1	1																		
25	Source Type	text		A1	Table 12 Block A	Impounding Reservoir	River	River	River	N/A	N/A	N/A												1 x I.R, 3 x River		1 x I.R, 3 x River		
26	Treatment type	text		A1	Table 12 Block B	W4	W4	W4	W4	N/A	N/A	N/A												4 x W4		4 x W4		
27	Average pumping head	m.hd	1	B4	Table 12 Block A	114.5	159.5	201.9	167.0	N/A	N/A	N/A												77.7		77.7		
E SEWERAGE DATA																												
28	Total length of sewer	km	2	B2									0.00	0.09	0.20	11.50	10.63	1.00							0.00	23.42	23.42	
29	Total length of critical sewer	km	2	B2									0.00	0.09	0.20	11.50	10.63	1.00							0.00	23.42	23.42	
F SEWAGE TREATMENT AND DISPOSAL DATA																												
30	Population equivalent of total load received	000		B3	Table 17b line 2								73.106	2.167	17.35	142.533	73.000	29.583	N/A	N/A					73.106	264.633	337.739	
31	Load received by STW's	kg BOD/day	0	B3	Table 17d								4386	130	1041	8552	4380	1775	N/A	N/A					4386	15878	20264	
32	Suspended solids consent	mg/l	0	A1	Table 17b line 3								45/150	20/50	20/50	35/-	35/90	10/30	N/A	N/A					N/A	N/A	N/A	
33	BOD5 consent	mg/l	0	A1	Table 17b line 4								25/80	7/30	8/30	25/50	25/50	10/35	N/A	N/A					N/A	N/A	N/A	
34	COD consent	mg/l	0	A1	Table 17b line 5								125	125	125	125	125	125	N/A	N/A					N/A	N/A	N/A	
35	Ammonia consent	mg/l	0	A1	Table 17b line 6								N/A	2/10	2/10	7.5/32	N/A	N/A	N/A	N/A					N/A	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	N/A	N/A					N/A	N/A	N/A	
37	Classification of Treatment Works	text		A1	Table 17b line 8								SAS	TA1	TA2	TA2	TA2	TA2	N/A	N/A					N/A	N/A	N/A	
38	Size band of sewage treatment works	nr	0	B3	Table 17c								6	4	5	6	6	6	N/A	N/A					N/A	N/A	N/A	
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	0.000	0.000	0.000	0.000	0.000	29.872	0.000	29.872	29.872
40	Sludge produced by the PPP facility	tids	3	B2									0.792	0.212	0.759	2.467	1.753	1.627	0.000	0.000	0.000	0.000	0.000	0.000	0.792	6.820	7.612	
41	Sludge exported to Duncrue Incinerator	tids	3	B2									0.792	0.212	0.759	2.467	1.753	1.627	0.000	0.000	0.000	0.000	0.000	0.000	0.792	6.820	7.612	
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	0.000	
43	Sludge exported to NI Water	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	0.000	
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	1.915	0.000	1.915	
45	Sludge disposed of from site to - Farmland Convesional	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	0.000	0.000	0.000	
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	26.366	0.000	26.366	
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	5.899	0.000	5.899	
48	Sludge disposed of from site to - Landfill	tids	3	A1	Table 17G Col 5								N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000	0.000	0.000	
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	N/A	1.792	0.000	1.792	
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	N/A	1.251	0.000	1.251	
51	Sludge disposed of from site to - Other	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	N/A	0.261	0.000	0.261	
52	Sludge disposed of from site - Total	tids	3	B2	Table 17G Col 9																				37.484	0.000	37.484	

Table 42 – PPP Reporting**Company Specific Commentary Obligations**

- **Service Dates:**

The Service Commencement Dates for Ballynacor WWTW and Ballynacor Sludge Facility have been updated to reflect the Certificates issued by the Authority since 1st April 2010.

- **Adjustment to Contract Payment Mechanisms:**

There have not been any adjustments to any Contract Payment Mechanism since 01 April 2010.

- **Changes To the Contract compliance Requirements;**

There have been no changes to the performance requirements at the various PPP Facilities.

- **Changes to the Descriptive Reports on the PPP Contracts**

There have been no changes to the descriptive reports on the PPP Contracts. These have therefore not been re- submitted.

Lines 4 & 5

These have been updated for Ballynacor WWTW and Ballynacor Sludge Facility to reflect Certificates issued for Service in the reporting period.

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 2009/10.

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. The significant increase in Omega costs in 2010/11 arises as Ballynacor WWTW and Sludge Disposal Services had not achieved service commencement during 2009/10 hence there were no costs recorded.

Line 9 - Unitary Charge Deductions

By contract definition, where the PPP Contractors invoice to an amount higher than the amount payable in accordance with the relevant Payment Mechanisms, the variance becomes a disputed amount. The Company recognises the disputed amount as an outstanding liability until such time as the Parties choose to have the dispute determined, or agree an amount for payment with credit note issued for closure as appropriate.

The Company recognises these disputed amounts as an outstanding liability until such time as the Parties choose to have the matters determined under Dispute Resolution, or agree an amount for payment with credit note issued for closure as appropriate. They are therefore included in the Unitary Charge Variable Charge data in line 8.

To include them in Line 9 would be to double count and cause Line 20 to be at variance with the Company's audited accounts.

Note: As the atypical expenditure and efficiencies in Alpha and the residual interest in Omega were not divisible by site the cross tots on lines 10, 11, 12, 15, 17, 18 and 20 will not agree to the figures in the total column – the figures included in the total columns are correct for each concession

Line 10 - Atypical expenditure

Alpha [REDACTED]

(a) An agreement is in place to provide for a change in unitary charge arising from [REDACTED] than that anticipated at financial close. The parties have agreed to reflect the variance in semi-annual Project Costs as per the Financial Model by making adjustments in the monthly invoice at the end of each Semi Annual Period. To this extent the repayments made in 2010/11 were [REDACTED]

(b) As a result of the [REDACTED] Change to the Contract an amount is deducted from the Alpha monthly invoice to reflect the [REDACTED] being carried out in house by NIW. The deduction amounted to [REDACTED] in 2010/11.

(c) A disputed amount between the parties of [REDACTED] existed at the end of 2009/10. This was settled in NIW's favour in 2010/11 resulting in the release of this amount from accruals.

Omega [REDACTED]

The Company had an opening provision in respect of contractor construction claims of [REDACTED] relating to [REDACTED]

[REDACTED] Both of these relate to the Duncrue site. Further claims have been received in 2010/11 in respect of these two issues and the provision has been increased to [REDACTED]. This has resulted in an atypical charge in 2010/11 of [REDACTED].

Kinnegar

There is no atypical expenditure on this Concession Agreement

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 been implemented during this period;

Alpha

An Authority Change [REDACTED] was instructed on Alpha to bring in house the [REDACTED] a [REDACTED] per month reduction in unitary charge for the period of the Service and an equal monthly transfer to the Company's in house [REDACTED] team. The parties have agreed to record this as an (indexed) deduction on a monthly basis from monthly invoices rather than diminish the value on costs associated with a Payment Mechanism Change. This is not shown as efficiency as the effect on the Company is neutral.

The same [REDACTED] Change activated the bespoke [REDACTED] Change [REDACTED] with savings of [REDACTED] in 2010/11 and a similar indexed amount per annum for the remainder of the contract. This took effect from 1st April 2010.

A further [REDACTED] was deducted from invoices in year resulting from the [REDACTED] change implemented in 2009/10.

Omega

No Contract Changes for cost reduction have been implemented during the Reporting Period

Kinnegar

No Contract Changes for cost reduction have been implemented during the Reporting Period

Line 13 - Capital Repayments

This line reflects the element of Alpha payments paying off the finance lease creditor. The data is consistent with the Company's financial accounts. In 2009/10 this figure was attributed to individual sites in proportion to the opening capital value recognised in the NIW accounts. For 2010/11 the finance lease model which gives total interest and lease repayment by site has been used. This is a more accurate method of site allocation than that used in 2009/10. The split between interest and lease repayment by site was then done on a pro-rata basis as follows:

	Per Model Capital £k	Cap Maint £k	Total £k	Interest £k	Cap Repayment £k
Castor Bay					
Dunore Point					
Ballinrees					
Moyola					
Limavady LM					
Ballymoney LM					
DBFO LM					

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

As Alpha is an on-balance sheet PFI contract the Company has recognised a finance lease creditor on its balance sheet - this figure represents the notional interest on the finance lease. The data is consistent with the Company's financial accounts. In 2009/10 this figure was attributed to individual sites in proportion to the opening capital value recognised in the NIW accounts. For 2010/11 the finance lease model which gives total interest and lease repayment by site has been used. This is a more accurate method of site allocation than that used in 2009/10. The split between interest and lease repayment by site was then done on a pro-rata basis as follows:

	Per Model Capital £k	Cap Maint £k	Total £k	Interest £k	Cap Repayment £k
Castor Bay					
Dunore Point					
Ballinrees					
Moyola					
Limavady LM					
Ballymoney LM					
DBFO LM					

The Company's statutory accounts have been prepared on an IFRS basis for the first time in 2010/11. This has resulted in the removal of note 24 relating to PPP hence reconciliation to this note is no longer appropriate.

The amounts disclosed in lines 12, 13,14,15,19 and 20 are all consistent with the figures in the Company's financial accounts pre IFRS adjustments.

A breakdown of the accruals included in the year end accounts in relation to unitary charges and disputed performance payments is as follows:

	Alpha	Omega	Kinnegar	Total
	£m	£m	£m	£m
Unitary Charge				
Disputed Amts				

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 NI Water contrive to give a new calculated figure for the individual sites and the Alpha contract as a whole.

Line 21a - Water Treatment Works Capacity

This is a new requirement and therefore new data not provided in AIR10.

Line 22 - Length of mains

This data has not changed since AIR10.

Lines 23 – 24 Turbidity

Background – Year on Year

During the period 2005 to date, a number of non-compliant water treatment works (WTWs) and small sources have either been completely replaced with new works, or else taken out of service as and when a replacement supply is available. During 2008, 5 existing major WTWs were replaced/upgraded as part of the Alpha PPP project. This contributed to the closure during 2009 of 6 non-compliant small water treatment works/sources.

During 2010 a further 2 non-compliant small water treatment works/sources were also closed. However, these were temporarily reinstated during the 2010-11 freeze thaw incident to supplement strained water supplies.

The turbidity compliance at WTWs has improved in 2010 with 29 exceedances of the limit in 2010, compared to 39 in the equivalent period in 2009.

The guidance now requires that the PPP sites are assessed in this table as opposed to NIW sites in table 11a.

The data used for the estimation of average flow at PPP WTWs in Table 42 lines 23 – 24 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. This led to the exclusion of 2 sites which were put out of service during the reporting period, with 24 other NI Water sites reported on. These 2 sites have been included in the report on line 3 "Turbidity not recorded".
- In addition to the 26 NI Water sites, the 5 PPP sites have been reported on separately in their own table.
- In its Drinking Water Quality Report for 2010, NI Water will be reporting overall on 31 sites.

2010 PPP WTW Included in calculations

WTW Code	WTW Name	MI/d	Turbidity 95 %ile	>= 0.5NTU	MI/d >= 0.5	MI/d < 0.5
W1301P	Moyola PPP	15.82	0.1928	0		15.82
W1701P	Ballinrees PPP	26.94	0.23	0		26.94
W2308P	Castor Bay PPP	79.11	0.215	0		79.11
W3301P	Dunore Point PPP	122.19	0.249	0		122.19
W3315P	Forked Bridge PPP	22.01	0.222	0		22.01
5 Sites	Overall DI Input	266.07				

Lines 25 – 26 – Source and Treatment Type

No change to the data for AIR10.

Line 27 - Average pumping head

Data has been updated to reflect the methodology for Table 12, where the variance in demand from the PPP sites placed on them by the Company, along with refinements to interstage pumping lifts combine to give a new calculated figure for the individual sites and the Alpha contract as a whole, whilst the methodology has not changed.

Lines 28 - 29 - Length of sewer and critical sewer

Now includes all sites where sewers (which are all Critical Sewers) are operated by the Contractor. The North Down WwTW data has been amended from 10.40Km to 10.63Km after revisiting the updated existing record drawings. The remaining information remains unchanged from AIR10.

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 NI Water which is the only variable part of the PE calculation.

Line 31 - Load received by STW's

Variation in calculated load stems from variation in the measured sewage loads delivered to the sites through the NI Water sewer network.

Lines 32 - 36 Consent Parameters

There have been no changes to the Water Order Consents.

Line 37 - Classification of Treatment Works

No change to the treatment facility classifications.

Line 38 - Size band of sewage treatment works

Size band of Armagh has changed from 6 to 5 as a result of the lower loads encountered during the Reporting Period.

Line 39 - Total sludge imported from NI Water

In AIR10 the Omega Contractor had a limited responsibility to dispose of sludges received at only Ballynacor Sludge Facility for a 6 week period.

From the 31 March 2010 the Omega Contractor has assumed responsibility for disposal of all NI Water sludges. This explains the significant data value change up to 29,872 TDS.

The Kinnegar WWTW import (792 TDS) is reported under Lines 40 and 41 as for the purpose of this Table it is not considered NI Water sludge.

Line 40 - Sludge produced by the PPP facility

In AIR10 the PPP Only table reported on a limited amount of sludge disposed off under a contract side agreement that saw the Omega Contractor take over Ballynacor Sludge Disposal Facility 6 weeks in advance of Service Commencement.

This year's data represents a full year of PPP disposal, hence the significant change in data recorded. Glen Water had produced 6,820 TDS within its own works with Kinnegar WwTW contributing 792 TDS which equates to 7,612 TDS.

Line 41 - Sludge exported to Duncrue Incinerator

The PPP Duncrue St Sludge Facility is now in Service and during the reporting period all NI Water and PPP sludges were exported to this facility for measurement (payment) purposes.

The figures in Line 41 represent only the figures exported from the PPP WWTW Facilities to the Duncrue St Sludge Facility.

This explains the significant rise in data input value, which following service commencement on 31 March 2010.

Line 42 - Sludge exported to other PPP facilities

All PPP Sites ultimately export to Duncrue St Sludge Facility before a route for disposal is established.

Some PPP sites (Armagh/ Richhill / Ballynacor) sludges do route through Ballynacor Sludge Facility for dewatering, but the sludge is still exported to Duncrue St.

To avoid double counting these in 'Exported to other PPP Facility' (Line 42) and again in 'Export to Duncrue St Sludge Facility' (Line 41), they are not recorded as being exported to another PPP Facility at all.

Line 43 - Sludge exported to NI Water

Once sludge service commencement was granted, the NI Water obligation to receive PPP WWTW sludges ceased. Hence the figure is now a nil figure.

Line 44 - Sludge disposed of from site to - Farmland Untreated

A first full year following service commencement on 31 March 2010 resulted in 1915 TDS.

Line 45 - Sludge disposed of from site to - Farmland Conventional

Nil disposal.

Line 46 - Sludge disposed of from site to - Farmland Advanced

A first full year following service commencement on 31 March 2010 resulted in 26,366 TDS.

Line 47 - Sludge disposed of from site to - Incineration

A first full year following service commencement on 31 March 2010 resulted in 5,899 TDS.

Line 48 - Sludge disposed of from site to - Landfill

A first full year following service commencement on 31 March 2010 resulted in 0 TDS.

Line 49 - Sludge disposed of from site to - Composted

A first full year following service commencement on 31 March 2010 resulted in 1,792 TDS.

Line 50 - Sludge disposed of from site to - Land Reclamation

A first full year following service commencement on 31 March 2010 resulted in 1,251 TDS.

Line 51 - Sludge disposed of from site to - Other

A first full year following service commencement on 31 March 2010 resulted in 261 TDS.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN- TABLE 43 KEY OUTPUTS
 PPP REPORTING - OPERATIONAL COSTS
 REPORTING YEAR 2010-2011

DESCRIPTION	UNITS	DP	Corresponding Report	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	SCHEME	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	
A PROJECT DESCRIPTION				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1 PPP Concession			na	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Kinnegar	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Omega	Alpha	Kinnegar	Omega	Water	Sewerage
2 Service Area			na	WT	WT	WT	WT	WD _{WT}	WD	WD	WWT	WWT	WWT	WWT	WWT	WWS	WWS	WWS	All	All	All	Service	Service	
3 Name of works			na	Balinrees	Castor Bay	Dunore Point	Moyola	DBFO LM & FBCT	Ballymoney LM	Limavady LM	Kinnegar	Richhill	Armagh	Ballynacor Craig	North Down	Ballyrickard	Ballynacor Lagoons	Ballynacor	Duncrue	Total	Total	Total	Total	Total
B PPP INFORMATION																								
4 Payment to Concessionaire	£m	3																						
5 Payment by Concessionaire to Operating Company	£m	3																						
C DIRECT COSTS TO NI WATER																								
6 Power	£m	3		0.362	2.429	2.951	0.529	0.004			0.000	0.038	0.100	0.610	0.862	0.245	0.000	0.328	1.479	6.275	0.000	3.662	6.275	3.662
7 Other direct costs	£m	3																						
8 Total direct costs	£m	3	sum 6 + 7	0.362	2.429	2.951	0.529	0.004	0.000	0.000	0.000	0.038	0.100	0.610	0.862	0.245	0.000	0.328	1.479	6.275	0.000	3.662	6.275	3.662
9 General and support expenditure	£m	3		0.024	0.024	0.024	0.023	0.023	0.023	0.023	0.041	0.023	0.023	0.024	0.024	0.024	0.000	0.023	0.024	0.164	0.041	0.165	0.164	0.206
10 Total functional expenditure	£m	3	sum 8 + 9	0.386	2.453	2.975	0.552	0.027	0.023	0.023	0.041	0.061	0.123	0.634	0.886	0.269	0.000	0.351	1.503	6.439	0.041	3.827	6.439	3.868
D OPERATING EXPENDITURE - NI WATER																								
11 Scientific services	£m	3									0.051	0.002	0.002	0.003	0.003	0.003					0.051	0.013		0.064
12 Rates	£m	3		0.263	1.046	1.249	0.164				0.268	0.008	0.069	0.283	0.085	0.068		0.052	0.096	2.722	0.268	0.661	2.722	0.929
13 Estimated terminal pumping costs	£m	3												0.180	0.189								0.369	0.369
14 Estimated sludge costs	£m	3																0.403	6.409			6.812		6.812
E TOTAL PPP OPERATING EXPENDITURE																								
15 Total PPP operating expenditure	£m	3	Sum 5, 10, 11 and 12																					

Table 43 - PPP Reporting – Operational Costs

Note: As the Alpha atypical expenditure was not divisible by site the cross total on line 4 for Alpha 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 AIR10 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.

A disputed amount of [REDACTED] is included in accruals at the year end.

It also includes atypical amounts as follows:

Quality Monitoring Change credit	[REDACTED]
Refund in respect of reorganisation costs	[REDACTED]
Release from 0910 accrual	[REDACTED]
Total	[REDACTED]

Kinnegar

The data is provided as an aggregate of the monthly invoiced amounts by the Contractor to the Company. It includes the disputed amounts where the Contractor has not recognised the Performance Deductions made by the Authority and has not provided a credit note to the original invoice.

The disputed amounts arising during 2010/11 are:

[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. It includes the disputed amounts where the Contractor has not recognised the Performance Deductions made by the Authority and has not provided a credit note to the original invoice.

Whilst the invoices from the contractor are attributed to the Facilities, had there been any performance deductions recognised these would have been applied on a monthly basis rather than a Facility (Scheme) basis and not possible to differentiate.

The disputed amounts arising during 2010/11 surround issues of:



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.

The Information regarding payment to the Operating Company was supplied by the Concessionaire.

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.

The Information regarding payment to the Operating Company was supplied by the Concessionaire on a monthly basis along with the Monthly Operating report.

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.

The Information regarding payment to the Operating Company was supplied by the Concessionaire.

Line 6 - Power

Power costs reported on this line reflect a facility breakdown of the power costs included in tables 21 and 22. This is taken directly from location codes in the Oracle system. In respect of the Kinnegar Concession the power costs are paid by the operating Company from the monthly payment from the Concessionaire. NI Water is unsighted in regard to this cost.

Line 7 - Other Direct Costs

Nil -the only direct costs associated with the PPP contracts are power costs.

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 AIR11 as Ballynacor was not reported as a PPP site in AIR10.

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. There were no PPP sludge costs reported in AIR10.

NORTHERN IRELAND WATER LIMITED- ANNUAL INFORMATION RETURN

ANNUAL INFORMATION RETURN - TABLE 44 OPA INPUT DATA
OVERALL PERFORMANCE ASSESSMENT

DESCRIPTION	UNITS	DP	1		2		3		4	
			REPORTING YEAR	CG						
			2007-08		2008-09		2009-10		2010-11	
A WATER SUPPLY										
DG2 PROPERTIES RECEIVING PRESSURE/FLOW BELOW REFERENCE LEVEL										
1	Total connected properties at year end	000	1						806.4	C2
2	Properties below reference level at end of year	nr	0						2020	B3
3	% of total properties at risk of low pressure (OPA Low pressure value)	%	2						0.25	B3
DG3 PROPERTIES AFFECTED BY UNPLANNED INTERRUPTIONS										
4	More than 6 hours	nr	0						476,289	B3
5	More than 12 hours	nr	0						214,274	B3
6	More than 24 hours	nr	0						40,959	B3
7	Total connected properties at year end	nr	0						806,444	C2
8	OPA supply interruption value	nr	2						95.79	B3
DRINKING WATER QUALITY										
9	% MZC Iron	%	2						97.60	A1
10	% MZC Managanese	%	2						99.69	A1
11	% MZC Aluminium	%	2						99.47	A1
12	% MZC Turbidity	%	2						99.95	A1
13	% MZC Faecal Coliforms	%	2						99.97	A1
14	% MZC Trihalomethanes	%	2						98.33	A1
15	Average Overall MZC figure (Drinking Water Quality OPA value)	nr	2						99.17	A1
B SEWERAGE SERVICE										
DG5 SEWER FLOODING - OVERLOADED										
16	Flooding incidents in the year (overloaded sewers)	nr	0						6	B3
17	Flooding incidents (overloaded sewers attributed to severe weather)	nr	0						4	B3
18	Number of domestic properties connected to sewerage system	000	1						612.1	C2
19	% of domestic properties flooded by overloaded sewers (Overloaded sewers OPA value)	%	4						0.0003	C2
DG5 SEWER FLOODING - OTHER CAUSES										
20	Flooding incidents (other causes - equipment failures)	nr	0						4	B3
21	Flooding incidents (other causes - blockages)	nr	0						14	B3
22	Flooding incidents (other causes - collapses)	nr	0						10	B3
23	Number of domestic properties connected to sewerage system	000	1						612.1	C2
24	% of domestic properties flooded by other causes (Other causes OPA value)	%	4						0.0046	C2
DG5 PROPERTIES ON THE FLOODING REGISTER										
25	2 in 10 register at end of year	nr	0						6	B4
26	Removed by company action	nr	0						0	B4
27	1 in 10 register at end of year	nr	0						3	B4
28	Number of domestic properties connected to sewerage system	000	1						612.1	C2
29	% of domestic properties considered to be at risk of flooding by sewage (At risk OPA value)	%	4						0.0012	B4
C SECURITY OF SUPPLY										
DG4 HOSEPIPE RESTRICTIONS										
30	Percentage of population served by NIW that has experienced hosepipe restrictions (OPA value)	%	1						0.0	A1
LEAKAGE										
31	Leakage (Target)	nr	2						175.00	
32	Leakage (Actual)	nr	2						176.97	B4
33	% of leakage target not met (Leakage OPA value)	nr	2						1.79	B4
SECURITY OF SUPPLY - ABSOLUTE PERFORMANCE										
34	Security of supply index - reference levels of service (Absolute performance OPA value)	nr	0						97	A2
SECURITY OF SUPPLY - PERFORMANCE AGAINST TARGET										
35	Security of supply index - reference levels of service	nr	0						97	A2
36	Security of supply index - planned level of service	nr	0						97	A2
37	% of target not met (Performance against target OPA value)	%	2						0.00	A2
D CUSTOMER SERVICE										
DG6 - RESPONSE TO BILLING CONTACTS										
38	Number dealt with within 5 working days	nr	0						103,710	B3
39	Total billing contacts	nr	0						104,897	B3
40	% of billing contacts answered within 5 working days (DG6 OPA value)	%	2						98.87	B3
DG7 - RESPONSE TO WRITTEN COMPLAINTS										
41	Total written complaints	nr	0						4,327	B2
42	Number dealt with within 10 working days	nr	0						4,326	B2
43	% of written complaints answered within 10 working days (DG7 OPA value)	%	2						99.98	A1
DG8 - BILLING METERED CUSTOMERS										
44	Company or customer readings (or both)	nr	0						65,156	A1
45	Total metered accounts	nr	0						100,071	A1
46	Metered accounts excluded from indicator	nr	0						32,275	A1
47	% of metered accounts which have meter based bills (DG8 OPA value)	%	2						96.11	A1
DG9 TELEPHONE CONTACT										
48	Total of calls not abandoned	nr	0						300,722	A2
49	Total calls received on customer contact lines	nr	0						340,989	A2
50	% calls not abandoned (0.25 of DG9 OPA value)	%	2						88.19	A2
51	All lines busy	nr	0						699,566	A2
52	% calls not engaged (0.25 of DG9 OPA value)	%	2						32.77	A2
53	Call handling satisfaction (0.5 of DG9 OPA value)	nr	2						4.59	A1
E ENVIRONMENTAL PERFORMANCE										
POLLUTION INCIDENTS										
54	Number of High & Medium category pollution incidents (Sewage)	nr	0						45	A1
55	Equivalent population served (resident)	000	2						2,115.82	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
57	Number of Low category pollution incidents (Sewage)	nr	0						217	A1
58	Number of Low sewage incidents per million resident population equivalent (pe) served (Low sewage incidents OPA value)	nr	2						102.56	C5
59	Number of High & Medium category pollution incidents (Water)	nr	0						1	A1
60	Winter population	000	2						1,814.34	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
SEWERAGE - SLUDGE DISPOSAL										
62	Percentage unsatisfactory sludge disposal (Sludge disposal OPA value)	%	2						0.00	A2
SEWERAGE SERVICE - BREACH OF CONSENT										
63	Percentage population equivalent (pe) served by NIW STWs that do not comply with the conditions of their discharge consents for sanitary determinands, phosphorus determinands and disinfection conditions. (STW compliance OPA value)	%	2						4.63	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		
			2010-11	CG	2010-11	CG	2010-11	CG	
A ELECTRICITY CONSUMPTION									
1	Grid electricity purchased (excluding renewable energy)	MW.hr	0	165,409	A1	98,618	A1	264,027	A1
2	Grid electricity purchased - renewable energy	MW.hr	0	37,520	A1	320	A1	37,840	A1
3	Non-renewable electricity generated and used	MW.hr	0	0	A1	0	A1	0	A1
4	Renewable electricity generated and used	MW.hr	0	165	A1	0	A1	165	A1
5	Total electricity consumption	MW.hr	0	203,094	A1	98,938	A1	302,032	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	2,750	A1	0	A1	2,750	A1
8	Total renewable energy generated	MW.hr	0	2,915	A1	0	A1	2,915	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	2,560	A2	3,234	A2	5,794	A2
10	Process and fugitive emissions	t.CO ₂ e	0	5,837	B3	6,315	B3	12,152	B3
11	Transport: company owned or leased vehicles	t.CO ₂ e	0	4,306	B3	268	B3	4,574	B3
B.2 Scope 2 Emissions									
12	Total grid energy used (including CHP electricity purchased).	t.CO ₂ e	0	110,639	A1	53,942	A1	164,581	A1
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	0.62	CX	0.62	CX
14	Outsourced activities (if not included in Scope 1 or 2) Energy and other	t.CO ₂ e	2	0.00	CX	0.00	CX	0.00	CX
15	Not used								
16	Not used								
17	Gross operational emissions	t.CO ₂ e	0	123,342	A3	63,760	A3	187,102	A3
C Net annual operational emissions									
18	Exported renewables (generated on-site and exported)	t.CO ₂ e	2	0.00	A1	0.00	A1	0.00	A1
19	Green tariff electricity purchased	t.CO ₂ e	2	-2498.04	A1	-0.17	A1	-2498.21	A1
20	Net operational emissions	t.CO ₂ e	0	120,844	A1	63,759	A1	184,603	A1
D ANNUAL OPERATIONAL GHG INTENSITY RATIO VALUES									
21	Operational GHG per Ml of treated water	t.CO ₂ e/Ml	0	0.350	B2	0.369	B2	0.357	B2
22	Operational GHG per Ml of sewage treated (flow to full treatment)	t.CO ₂ e/Ml	0	0.522	CX	0.523	CX	0.523	CX
23	Operational GHG per Ml of sewage treated (based on water distribution input)	t.CO ₂ e/Ml	0	0.801	C4	0.803	C4	0.803	C4
E RENEWABLE INCENTIVES									
24	Revenue from renewable energy sales and incentives	£000	3	266.729	A2	0.000	A1	266.729	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 11 return.

Processing rule:

Table 45 has been populated in line with guidance provided by NIAUR and contains data sets both internal and external as required and as set out within the sections detailed below.

Table 45 reports emissions generated by the Company and outsourced PPP concessions working for the appointed business in carrying out any part of its regulated activities.

Table 45 reports emissions generated by the Company and by outsourced PPP concessions in separate columns and also calculate a Company total.

Reporting Outputs

Table 45 has been populated in line with the reporting requirements outlined in the methodology statement for this table and this is detailed further below.

Data has been provided in Table 45 for energy consumption, gross and net tonnes CO₂e of operational emissions, GHG intensity ratios and revenue from renewable 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 13.44% of its total electricity consumption within the reporting period.

Self generated renewable electricity has been via hydro schemes across several sites and these are detailed in Table 1.

Table 1

Site	kWhrs
Fofanny	164,612
Oaklands	247,163
Silent Valley	2,503,163

Further investigatory work is ongoing to enable installation of hydro and wind turbine systems at other sites within the current Regulatory period. This incoming year should also see generation at the new incineration plant at Duncrue Street.

The level of self generation is further complemented by procurement of renewable electricity from the SEM and this years prediction for purchased

renewable is currently in the region of 14-15% from good quality climate change levy exempt renewable sources.

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 Megalitre 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 roads 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 MI of treated water	tonnes CO ₂ e/ML	0.350	0.369	0.357	B2
Annual operational emissions intensity ratio per MI of treated sewage (FFT)	tonnes CO ₂ e/ML	0.522	0.523	0.523	CX
Annual operational emissions intensity ratio per MI of treated sewage (DI Input)	tonnes CO ₂ e/ML	0.801	0.803	0.803	C4

Calculations for the tonnes CO₂e/ML intensity ratio have been generated from the CAW outputs using data from AIR11 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 energy sales and associated incentives such as NIROCs.

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 UKWIR Carbon Accounting Workbook Version 5.0

Processing rules and Emissions Conversion Factors:

The Company has provided output data within Table 45 as calculated using the Water UK Carbon Accounting Workbook (CAW) Version 5 (March 2011) for greenhouse gas emissions associated with the provision of water, wastewater and sludge disposal in its AIR11 return.

Data sources for the AIR 11 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 treated as described in the DECC/Defra guidelines using the relevant emissions factor for kg of CO₂ per measured unit of energy and the calculations are carried out within locked cells in the CAW and the major emission conversion factors are detailed in Table 3.

Table 3

Component	Value	Units
Grid Electricity	0.5416	kg CO ₂ / kWh
Renewable Electricity	0.5416	kg CO ₂ / kWh
Gas Oil	2.7667	kg CO ₂ / litre
Petrol	2.3018	kg CO ₂ / litre
Diesel	2.6413	kg CO ₂ / litre
Natural Gas	0.18485	kg CO ₂ / kWh
Petrol Car	0.34578	kg CO ₂ / mile
Diesel Car	0.29124	kg CO ₂ / mile

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 an extrapolation 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 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 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 AIR11 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 and carbon management. This development is linked to the Company's developing climate change and carbon accounting strategies 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 11 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 return)

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 AIR12 reporting.



Annual Information Return 2011

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 2011: 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 (Pointer Plus Version October 2008).
- 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, complaint is passed to Leakage DMU for investigation.
- Leakage DMU undertake an investigation in accordance with 'Methods and Procedures' above. Findings are reported to Contact Centre, who inform customer of NI Water's response.

2. Extract from DG2 Register

UPRN	Status_Date	Status	House No	Address 1	Town_City	Postcode	County	DMA	Pressure	Pressure Type
185247094	31-Mar-09	In Register	█	█	Ballynahinch	BT24 8YQ	Down	Ballykine Ballynahinch East	11.78	Surrogate
185250413	31-Mar-09	In Register	█	█	Dromore	BT25 1RL	Down	Redhills	12.4	Surrogate
185250433	31-Mar-09	In Register	█	█	Dromore	BT25 1RQ	Down	Redhills	8.4	Surrogate
185250437	31-Mar-09	In Register	█	█	Dromore	BT25 1RQ	Down	Redhills	10.4	Surrogate
185253567	31-Mar-09	In Register	█	█	Dromore	BT26 6EG	Down	Redhills	7.23	Surrogate
185253568	31-Mar-09	In Register	█	█	Dromore	BT26 6EG	Down	Redhills	7.23	Surrogate
185253570	31-Mar-09	In Register	█	█	Dromore	BT26 6EG	Down	Redhills	5.23	Surrogate
185253571	31-Mar-09	In Register	█	█	Dromore	BT26 6EG	Down	Redhills	3.23	Surrogate
185253575	31-Mar-09	In Register	█	█	Dromore	BT26 6EG	Down	Redhills	6.23	Surrogate
185253576	31-Mar-09	In Register	█	█	Dromore	BT26 6EG	Down	Redhills	6.23	Surrogate
185262474	31-Mar-09	In Register	█	█	Lisburn	BT27 5JN	Down	Royal Ascot	14.42	Surrogate
185262475	31-Mar-09	In Register	█	█	Lisburn	BT27 5JN	Down	Royal Ascot	8.66	Surrogate
185262493	31-Mar-09	In Register	█	█	Lisburn	BT27 5JN	Down	Royal Ascot	9.14	Surrogate
185262500	31-Mar-09	In Register	█	█	Lisburn	BT27 5JN	Down	Royal Ascot	6.45	Surrogate
185262501	31-Mar-09	In Register	█	█	Lisburn	BT27 5JN	Down	Royal Ascot	10.7	Surrogate
185272851	31-Mar-09	In Register	█	█	Lisburn	BT28 2ND	Antrim	Magheraliskmisk High Level	14.831	Surrogate
185272861	31-Mar-09	In Register	█	█	Lisburn	BT28 2NE	Antrim	Magheraliskmisk High Level	10.485	Surrogate
185275611	31-Mar-09	In Register	█	█	Lisburn	BT28 3AP	Antrim	Pond Park	12.542	Surrogate
185275612	31-Mar-09	In Register	█	█	Lisburn	BT28 3AP	Antrim	Pond Park	11.828	Surrogate
185275613	31-Mar-09	In Register	█	█	Lisburn	BT28 3AP	Antrim	Pond Park	13.468	Surrogate
185276205	31-Mar-09	In Register	█	█	Lisburn	BT28 3DG	Antrim	Rathvarna	14.686	Surrogate
185276206	31-Mar-09	In Register	█	█	Lisburn	BT28 3DG	Antrim	Rathvarna	14.042	Surrogate

3. Sources of information

For AIR11 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 that was completed in the 2009/10 year. Similarly the update of properties on the register as a direct result of networks improvements was undertaken. Finally, additions to the company register were processed where better information became available.

5. Assumptions and exclusions

For AIR10, the only exclusions listed were those properties within 15m elevation of the supplying service reservoir. For AIR11, following NIAUR guidance, the DG2 register now includes these properties in the gross DG2 figure.

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 AIR11 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.

Where analysis identifies properties 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 Properties Affected by Supply Rotation**
- 8.0 Properties Affected by Service Reservoir Drain-down**

Appendix A – Roles and Responsibilities

Appendix B – Process Flow Diagram – Unplanned Interruptions

Appendix C – Process Flow Diagram – Planned Interruptions

Appendix D – Proforma - Interruption Information Sheet

Appendix E – 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 Operations Services in Capital House.

2.0 REPORTING REQUIREMENTS

The information to be reported within Table 2 of the Annual Information Return (AIR) is as follows:

2.1 Line	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 Northern Ireland Water Limited 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 (> 3 Hrs) 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 48hr 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 shut down 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 Operations Directorate or by functions within other NIW Directorates. These have been identified as follows:

- Planned interruptions carried out by Networks Water,
- Planned interruptions carried out by Leakage,
- Planned interruptions carried out by Engineering and Procurement (E&P) and,
- Planned interruptions carried out by 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 hrs warning must be given for planned interruptions greater than 3 hrs. 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 48hrs. 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

Field Staff on site is to record all information on a proforma sheet (see Appendix D). The proforma sheet contains the raw data associated with the interruption and is taken to an appropriate computer workstation for input into OMIS. These proforma sheets must be kept for audit purposes.

The Networks Water or Leakage 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 Operation Services in Capital House.

4.3 Planned interruptions carried out by E&P or Field Services.

E&P and Field Services use a combination of an interruption Proforma and an excel spread sheet. An appropriate member of E&P or Field Services staff should sign off the information to be recorded in the DG3 Register each week/month.

Details of the Interruptions Proforma (see appendix D) and spreadsheet can currently be obtained from Operation Services 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 Operatives on site record all information on a proforma sheet (see appendix D). The proforma sheet contains the raw data associated with the interruption and is taken to an appropriate computer workstation for input into OMIS. These proforma 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 Operations Services in Capital House.

Networks Water and Leakage record interruption information on the OMIS system. E&P and Field Services record interruption information on excel spread sheet.

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 only).

The OMIS information sheet (proforma) form Appendix D of this document.

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 Operatives 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 Operations Services for inclusion into the DG3 Register and calculations for KPIs.

5.2 Interruption Excel Spreadsheet

Planned interruptions undertaken by E&P and Field Services will most likely be carried out by a number of contractors. The contractors representative should gather all appropriate information on an Interruptions Proforma 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 E&P or Field Services staff and sent to Operations Services for inclusion into the DG3 Register. All proformas should be stored by E&P and Field Services for Audit purposes.

Details of the Interruptions Proforma (see appendix D) and spreadsheet can currently be obtained from Operation Services in Capital House.

5.3 Property numbers and Addresses

It is a requirement of NIAUR that the numbers of properties and address details of properties affected by interruptions to supply exceeding 3 hours are recorded. The numbers of properties and address details should be determined by the most accurate means available at the time. This is likely to be by one of two methods.

a. Visual Property Counts

In the case of small scale interruptions, a Field Operative 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 Operatives 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 in Operation Services.

In general all interruption to supply should be recorded. However there are large numbers of very short interruptions to supply carried out by Leakage function and Field Services. These interruptions are routine, inconsequential and last no longer than 30mins. Information about these interruptions is held by managers in Leakage and Field Services and are 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 and Field Services managers.

In general: Routine interruptions lasting less than 1 hr need not be recorded as part of the interruptions register except at the discretion of the Field Operative 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*. Operations Services will email the different functions reminding them of the deadline at the end of each month. Interruption records held by E&P and Field Services should be sent to Operations Services 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 including proformas corresponding to individual interruption records 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 NIWL 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 Operations Service function to compile a DG3 Register for each month and corresponding KPIs.

The following reports are generated by Operations Services 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 2010, Issue 1.0 – March 2010).

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 Operations Services 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 AIR10 Reports and KPIs is transferred to the “AIR10 Return & KPI” worksheet. This worksheet is in the form of two tables. The first is the extract from the AIR10 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 AIR10 table for that particular line.

The second table contains the relevant DG3 Register information, recorded on a monthly basis, which is 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 Properties Affected by Supply Rotation

Unplanned interruptions caused by supply rotation during the Freeze/Thaw were not captured on OMIS. Instead, the following process was used to determine the numbers of properties affected by such interruptions.

As part of the documentation of events relating to the Freeze/Thaw, the Operations Directorate compiled lists of district metered areas in the east and west of the province where supply rotation affected supplies to properties. For DMA lists please refer to the following files:

- Summary DMA Rezoning During Major Incident - East
- Summary DMA Rezoning During Major Incident - West

As DMAs are digitised on the company's geographical information system, it was possible to accurately determine the numbers of properties affected within each DMA.

By comparing the start and finish times of the supply rotation it was possible to determine the duration of each distinct interruption and to calculate the total numbers of properties affected within the >3hr, >6hr, >12hr and >24hr time bands.

8.0 Properties Affected by Service Reservoir Drain-down

Unplanned interruptions caused by service reservoir drain-down during the Freeze/Thaw were not captured on OMIS. Instead, the following process was used to determine the numbers of properties affected by such interruptions.

As part of the documentation of events relating to the Freeze/Thaw, the Operations Directorate compiled lists of service reservoirs throughout the province where low water levels affected supplies to properties. For SR lists please refer to the following files:

- Properties Affected by Low SRs during Freeze Thaw Dec only
- Properties Affected by Low SRs during Freeze Thaw

The number of properties affected by each service reservoir on each day was recorded.

Due to the nature of the collated data, the following assumptions have been made:

Assumption 1: Where properties were only affected on one day in an unbroken sequence, the properties experienced an interruption of more than 12hrs but not more than 24hrs.

Assumption 2: Where properties were affected on more than one day in an unbroken sequence, the properties experienced an interruption of more than 24hrs.

By making these assumptions, the duration of each distinct interruption has been estimated and the total numbers of properties affected within the >3hr, >6hr, >12hr and >24hr time bands have been calculated.

Appendix A – DG3 Interruption to Supply - Roles & Responsibilities

Customer Relations Centre (Normal Hours)

- Log 'no water' / 'burst main' complaints into RapidXtra system.

Operations - Networks Water

- The Area Managers and Field Managers are responsible for the procurement of information for DG3 within the Networks function.

Operations - Leakage Services

- The Area Managers and Field Managers are responsible for the procurement of information for DG3 within the Leakage function.

Engineering and Procurement E&P

- The E&P Directorate is responsible for the installation of new watermains. Interruptions to supply arise as a result of connecting properties to the new watermains.

Field Services

- 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.

Operations Services

Operations Services is responsible for the following:

- Receipt of all interruption information from Networks Water, Leakage, E&P and Field Services,
- Compiles each set of information into the DG3 Register,
- Audits Data,
- Produces reports for Management and Regulator,
- KPIs.

Telemetry Control Centres (Out of Hours)

Log 'no water'/'burst main' complaints into Work Planning (Ellipse) system and inform on call supervisor immediately.

- Westland Telemetry Control Centre (Tel: [REDACTED] or Ext: [REDACTED])

TCC E-mail Addresses:-

[REDACTED]

- Altnagelvin Telemetry Control Centre (Tel: [REDACTED] or Ext [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 Operations Services 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

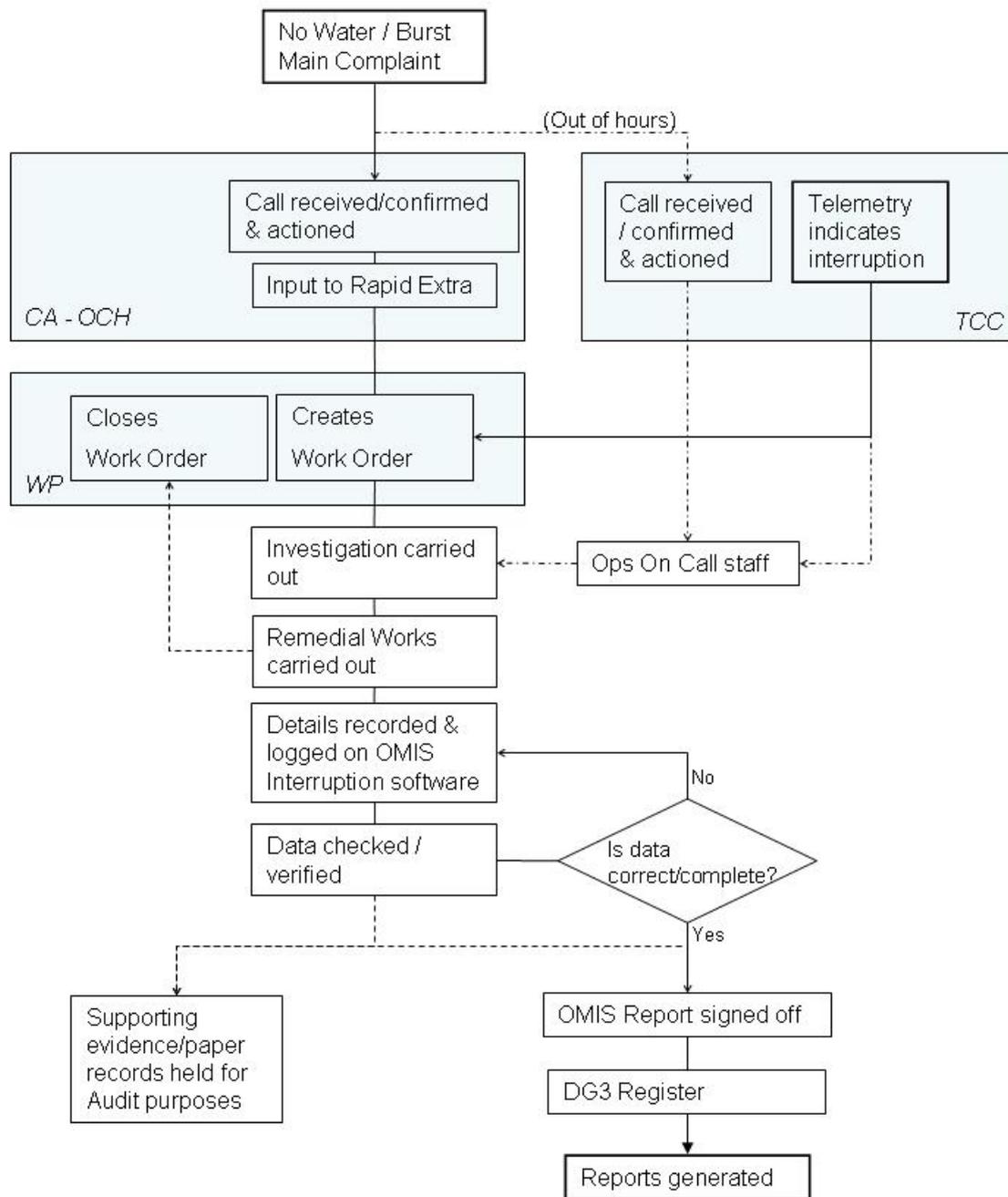
- Approves OMIS Interruptions Register and release data for reporting purposes.

Regulation & Business Performance Section

- Submit Annual Report to NIAUR.

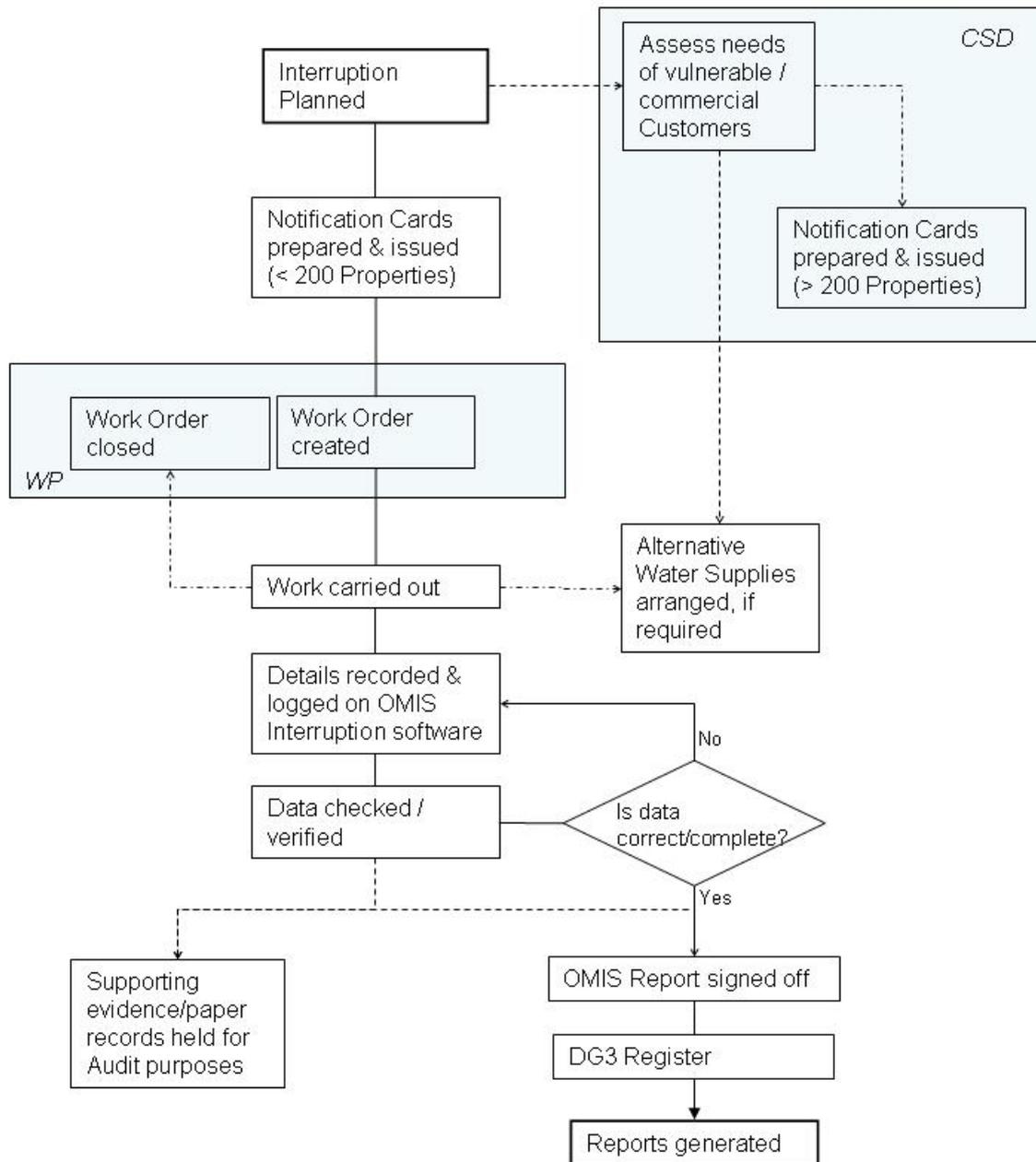
DG3 Process Flow Diagram - Unplanned

Appendix B



DG3 Process Flow Diagram - Planned

Appendix C



Appendix D – Proforma - 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	> 24 Hrs
<input type="text"/>	<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	> 24 Hrs
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Comments (255 characters max)				
<input type="text"/>				
				Close
				Save

Northern Ireland Water

Level of Service Methodology

DG5 Flooding

Contents

- 1. Introduction**
- 2. DG5 Flooding Incidents – Internal and External**
- 3. DG5 Properties at Risk of Flooding – Internal and External**

Appendix A – AIR 11 Table 3 Internal Flooding Key Outputs

Appendix B – AIR 11 Table 3a External Flooding Key Outputs

Appendix C – Flooding Incident Report (April 2011)

Appendix D – Customer Response Scripts

Appendix E – Methodology Flow Charts

1. Introduction

Objective and Aim

Companies 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.

If a property on the register is not reported as being at risk under DG5, the reason should be stated.

The DG5 register is in the process of being developed and during the course of the development it has been necessary to run a 2 tire approach for the determination on Internal flooding incidents namely Historical Data and 'LiveData' i.e. data captured for the reporting year of 2010/2011.

Reporting Requirements

Four main outputs are required to be produced relating to the flooding for AIR 11

- 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.
- DG5 Annual External Flooding Summary – includes areas Externally flooded as a result of overloaded sewers and other causes.

- DG5 Areas on the External 'Flooding' register – areas at risk of flooding more frequently than once in twenty years and once or twice in ten years, problem status of the external areas on the register, annual changes to the register.

The information relating to the above are contained in Tables 3 and 3A of the AIR11 Return. See Appendix A & B

Definitions

Flooding incidents: For the purpose of the return, a flooding incident is defined as an event of Internal flooding (as defined below) from a public sewer (whether foul, combined or surface water).

Internal flooding: For the purposes of DG5, Internal flooding is defined as flooding which enters a building or passes below a suspended floor. For reporting purposes, buildings are restricted to those 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. This exclusion encompasses both:

Detached garages (whether situated inside the boundary of the property and separated from the main building or outside the boundary but with common access as in a garage block); and

Linked detached garages (i.e. garages which are attached to a property but separated from it by an External passageway).

However, garages forming an integral part of a property are classed as part of the building and are included, even if their prime purpose is storage, etc.

Overloaded sewers: A sewer is overloaded when the flow from a storm is unable to pass through it due to a permanent problem (e.g. flat gradient, small diameter). Temporary problems such as blockages, siltation, collapses and equipment or operational failures are excluded. No account should be taken of the severity of the storm causing the incident.

Properties at risk: These are defined as properties that have suffered or are likely to suffer Internal flooding from public foul, combined or surface water sewers due to overloading of the sewerage system more frequently than the relevant period (either once in twenty years or once or twice in ten years).

Severe weather: All flooding incidents should be reported irrespective of the severity of the storm. Companies may indicate in the commentaries when flooding incidents have been due to severe rainfall and this information will be taken into account when producing the 'Levels of service' report.

Uninhabited cellars: An uninhabited cellar is defined as an integral part of a

building that is at least partially below ground level. It is not used for habitation. Where such a cellar is in regular use as part of the normal living accommodation it is termed a basement and any flooding should be reported as a normal Internal flooding incident.

Reporting

NIW Reports -The following reports are generated by Operations Services for Management information:

DG5 (Internal and External) Annual Flooding Summary - Annual
DG5 (Internal and External) Properties on the Risk Registers - Annual
Monthly Reports for NIW 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 2011

The DG5 Registers have now been developed using evidence gathered from the Sewer Maintenance Contractor, Flooding Incident Reports (FIR), Operational reports and direct customer contact along with 10% Top Slice Audit on all orders sent to Meridian for the historic and current flooding records. These records are of varying quality dating back to 2000. Initially there were 1,600 records in the Internal Database and 40,000+ records in the External Database. In order to develop a DG5 Database each of the records contained in each of the databases has to be investigated to see if the flooding information meets the DG5 Criteria. This investigation has taken place for the historical Internal flooding records, but as yet NIW are not in a position to investigate the 40,000+ historical External flooding records. Records having been determined as being DG5 reportable are assigned to an appropriate "Flood Register" (All Historical Internal records dating back to 2000 had been placed in several Categories i.e. 1:10, 1:20 and 2:10 but have now been defaulted into 1:20 as per the Regulator's Instruction in the Reporters Report of 2010)

As a result of this initial cleansing exercise, 742 suspected DG5 properties out of 2000+ historical records were confirmed as flooding incidents and were defaulted to the 1:20 register. Although a considerable amount of work has been carried out in the initial default determination of 2000+ historical Internal flooding records further work has been carried out on the remaining 742 records to accurately determine each individual flooding incident. As a result 140 historical records remain in the 1 in 20 flooding register. The remaining historical records have been determined as flooding other causes and placed in the excluded section of the flooding register.

In addition 37 properties protected by mitigating measures have been added to the 1 in 20 flooding register.

Call centre scripting (see appendix D) has been revised in the last 12 months regarding Internal and External 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 (April 2011 see appendix C) forms and new Script procedures (Nov 10) will help to achieve this target.

NIW are currently agreeing a program for the development of the Flooding register along with methodologies, processes, definitions and roles and responsibilities. NIW will work towards full reporting capability for both Internal and External flooding incidents before the end of the PC10 period. To implement the changes needed a Panel of Experts has been established comprising appropriate key personnel from within the business.

Initially, the role of the DG5 panel was to provide a forum in which all areas of the business could feed into the flooding register development exercise for both Internal and External flooding. However, now that the Internal Flooding Register and supporting business processes have been developed, the focus of this panel has shifted to agreeing additions to and removals from the Internal DG5 register, while ensuring the business process is maintained at all levels.

Work has progressed during the year to identify critical and lateral sewers these layers have been recently added to NIW's Corporate Asset Register. Because of this work NIW should be in a better position for AIR12 to report on whether collapses or blockages have occurred in a private lateral, public lateral or public main sewer.

Those records that are then determined as being DG5 Reportable are assigned to an appropriate Flooding 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 the same manner as the Internal flooding incidents.

2. DG5 Flooding incidents

Internal

Data gathering and calculation is as described below.

Sources/Process for all lines 2 to 11

A download of Internal sewer flooding records was obtained from the Ellipse system for the period April 10 to March 11 on a month by month basis.

The records were sorted firstly by Creation Date field, then by Street Name field, then by Property Number field, and finally by Town/City field.

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, Flooding Report Forms, Field Manager reports and contacting the Customers directly, are removed, the remaining properties were combined for a yearly total.

Assumption

For the purpose of AIR11, NIW 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.

Lines 2, 3, 6, 8, 9 and 10

A count was then made on these records that represented one Internal flooding complaint per unique property, meaning that properties affected by more than one incident were reported only once, as per the definition.

These properties were then sub-divided into the appropriate categories for lines 2, 3, 6, 8, 9 and 10 using the information gathered from, the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports and contacting the Customers directly.

Line 4

A sort was carried out on all addresses to eliminate properties with ‘flooding other causes’ as found from the investigations using the information gathered from the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports and contacting the Customers directly.

The remaining properties are those either flooded due to overloaded sewers or flooding due to overloaded sewers attributed to severe weather.

A Met office report was obtained for each of these lines to ascertain if the cause of the Internal flooding was due to weather conditions.

As per the definition this line's enumeration includes flooding incidents caused by severe storms which affect properties that are **not** at risk of flooding more frequently than once in ten years therefore a check was made on historical records to determine this.

Line 4a Properties

A sort was carried out on all addresses to eliminate properties with 'flooding other causes' as found from the investigations using the information gathered from the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports and contacting the Customers directly.

The remaining properties are those either flooded due to overloaded sewers or flooding due to overloaded sewers attributed to severe weather.

A Met office report was obtained for each of these lines to ascertain if the cause of the Internal flooding was due to weather conditions.

As per the definition this line's enumeration includes flooding incidents caused by severe storms which affect properties that are **not** at risk of flooding more frequently than once in ten years therefore a check was made on historical records to determine this.

Lines 5 and 11

As stated in last year's methodology. An additional new Flooding Incident Report Form has now been amended to capture the required detail for flooding of cellars and NIW should be in a position to report on these lines for AIR11.

Line 7

A count was then made on these records that represented one Internal flooding complaint per unique property identified as caused by blockage, collapse or equipment failure.

These annual records were combined with the list of historical records stating cause of flooding to be blockage, collapse or equipment failure.

A sort on the date of incident field and address field gave the number of properties that have flooded more than once in the last 10 years due to other causes.

Changes in Methodology over the Previous Year

External

Data gathering and calculation is as described below.

Sources/Process for all lines all Lines 1 to 11

Data gathering and calculation is as described below.

Sources/Primary Process

1. A download of External sewer flooding records was obtained from the Ellipse system for the period April 10 to March 11 on a month by month basis. WWBU also receive information, via Flood Incident Reports (FIR's) from the contractor, of flooding incidents which originate as a blocked sewer but further develop into a flooding incident. These are investigated manually through returned FIRs to ensure no Duplication.
2. Data is transferred to an Excel spreadsheet for interrogation and sort filters are applied.
3. Records are sorted by date, property number, street name and town in that order.
4. Repeat instances are removed (this includes repeat calls received within three days of an incident occurring).
5. Remaining records are representative of one External flooded area per unique External flooding incident (there may be Internal flooding records relating to these same properties and these same incidents).
6. These are cross referenced and those reported on the Internal flooding records are removed.
7. Remaining records are representative of one External flooded area per unique property per unique External flooding incident.
8. These areas were then sub-divided into the appropriate categories for lines 1-11 using the information gathered from, the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports and contacting the Customers directly.

Assumption

For the purpose of AIR11, NIW 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.

Sources/Secondary Process

1. Records representative of one External flooding complaint per unique property per unique External flooding incident were derived using the Primary

Process previously described.

2. Wastewater Business Unit (WWBU) carries out further investigations to determine the cause of the flooding incident.
3. WWBU assess the information held on customer report, Flood Incident Report (FIR), along with photographic evidence and closure details provided by the contractor.
4. WWBU determine if the cause of the flooding incident was hydraulic incapacity, Severe Weather or flooding other cause, i.e. Blocked Sewer, Equipment Failure or Collapsed Sewer. This is done by a number of methods including Desk Top Investigation, Site Visits, Concentric Circle Surveys, Customer Interviews, Field Manager interviews and review of existing incident information.
5. 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 6).
6. These properties were then sub-divided into the appropriate categories for lines 1, 2, 3, 4, 5, 6, 7, 9, 10 and 11 using the information gathered from, the Sewer Maintenance Contractor, Flooding Report Forms, Field Manager reports and contacting the Customers directly.
7. All confirmed incidents of External flooding (other causes) have been recorded on an Excel spreadsheet. A pivot table was used to establish areas of multiple flooding incidents during the year. The number of areas of multiple incidents are manually counted to give the number of areas flooded in the year for Line 8. This process will continue year on year to provide the figures for the External Flooding Register.

Assumption

For the purpose of AIR11, NIW has assumed that a single incident includes recorded complaints from the same property, neighbouring properties and neighbouring streets 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.

Changes in Methodology over the Previous Year

There have been changes in the methodology from that as reported for AIR10. The raw data is from the same source i.e. Ellipse Work Management System but the information being input to the system is more accurate as the Call Centre Script Aug 10 has been further refined (as per regulator’s recommendation Nr.4 in 2010) to ensure a more logical flow of questions is **asked** to determine the nature, location and extent of the flooding being reported. Figures are derived using the new Line - Specific Methodology Statements and calculation sheets. As per regulator’s recommendation Nr.8 in 2010, a new Flooding Incident Report (FIR) has been drafted for implementation by the sewer maintenance contractor (April 2011), this now requires the contractor to scan photographic evidence onto the actual FIR and to provide more detailed information for the business unit. The

WWBU also carry out more detailed route cause analysis of the sewer flooding. Going forward NIW intend to receive this information electronically and will be stored in disc format which will be more in line with the EMS policy of reduce and reuse.

Future Reporting

The decision has been taken to develop an External Flooding register from this reporting year as we do not have accurate historical data to report reliable information.

Conclusion

NIW have made significant changes on reporting for AIR11, this has been achieved by better processes and better Data Quality, along with new tracking and reporting measures. The Business Unit now has experienced staff in post this year to ensure improved data quality for Internal Flood Reporting and has adopted same processes and procedures to have improved data quality and reporting for External Flooding Incidents by end of PC 10 period.

Appendix A – AIR 11 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 – AIR 11 Table 3a External Flooding**ANNUAL INFORMATION RETURN - TABLE 3A KEY OUTPUTS
SEWERAGE SERVICE - EXTERNAL FLOODING (TOTAL)**

DESCRIPTION		UNITS
A	ANNUAL FLOODING SUMMARY	
	(i) OVERLOADED SEWERS	
1	Areas flooded externally in the year (overloaded sewers)	nr
2	Curtilege flooding incidents in the year (overloaded sewers)	nr
3	Highway flooding incidents (overloaded sewers)	nr
4	Other flooding incidents (overloaded sewers)	nr
5	Total flooding incidents (overloaded sewers)	nr
6	External flooding incidents (overloaded sewers attributed to severe weather)	nr
6a	Areas flooded externally attributed to severe weather	nr
	(ii) OTHER CAUSES	
7	Areas flooded externally in the year (other causes)	nr
8	Areas which have flooded more than once in the last 10 years (other causes)	nr
9	Flooding incidents (other causes - equipment failure)	nr
10	Flooding incidents (other causes - blockages)	nr
11	Flooding incidents (other causes - collapses)	nr
B	AREAS ON THE 1:10, 2:10, 1:20 AT RISK REGISTER	
	(i) SUMMARY	
12	2 in 10 register at end of year	nr
13	1 in 10 register at end of year	nr
14	1 in 20 register at end of year	nr
15	Total on the 1:10, 2:10, 1:20 register at end of year	nr
15A	Potential risk of property flooding identified requiring further investigation to assess at risk category.	
	(iii) ANNUAL CHANGES TO 1:10, 2:10, 1:20 REGISTER	
20	Removed by company action (external only)	nr
21	Removed by company action (external linked)	nr
22	Removed because of better information	nr
23	Added because of better information (actually flooded)	nr
24	Added because of better information (modelled)	nr
25	Transferred from external to internal register	nr

Appendix C Flood Incident Report (FIR)**Northern Ireland Water - Flooding Incident Report**

Work Order Ref No

Location:

Date:

Arrival time

Completion time

1) **Internal Flooding** Main Sewer Lateral Sewer Adjacent properties flooded Detached 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 flooding:- (Select only one category below)

Blockage Other Collapsed sewer Defective road gully Defective private drain
 M&E equipment failure

4) Clean up operations:-

Not Required Further Action Required Completed

5) Previous History:-

Yes No Not Aware

6) Weather Conditions:-

Dry Wet Heavy Medium Light

Comments: Especially for Flooded jobs or Follow on jobs

.....
.....
.....
.....

Scan and Insert Photo for All Flooded Jobs.

Name Date

Attach Map with indication of where Blockage was cleared.

Appendix D

CRC Scripts

Author	[REDACTED]
Feedback Email Address	[REDACTED]
Version	1.0
Status	Approved
Comment	New eGain scripts for Network Sewage & Network Water
Created	01/02/2010 09:52:04
Last Modified	29/04/2010 16:54:28
Model Path	\\CRC Scripts\0.6

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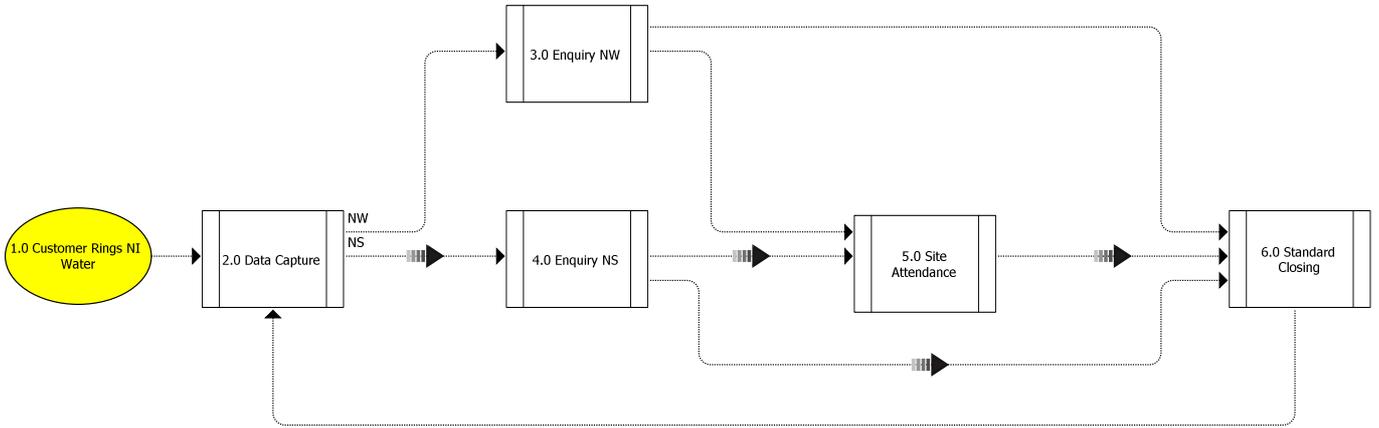


CRC Scripts

\\CRC Scripts

Feedback Email Address:

This process covers scripts that are used within the CRC to aid agents in diagnostics for Operational customer calls.



Process Hierarchy

Name	Description	Owner
1.0 CRC Scripts	This process covers scripts that are used within the CRC to aid agents in diagnostics for Operational customer calls.	
2.0 Data Capture	This process covers the general opening and data protection activities	
3.0 Enquiry NW		
3.5 Appearance Issues		
3.6 Low Pressure		
3.7 No Water		
4.0 Enquiry NS	This covers customer's complaints on: Blocked sewer Internal flooding External flooding	
4.16 Blocked Sewer		
4.18 Out of Sewer Flooding (Internal)		
4.20 Out of Sewer Flooding (External)		
5.0 Site Attendance	Information needed for when NIW can visit customer's premises.	
6.0 Standard Closing	How each customer's call should finish.	

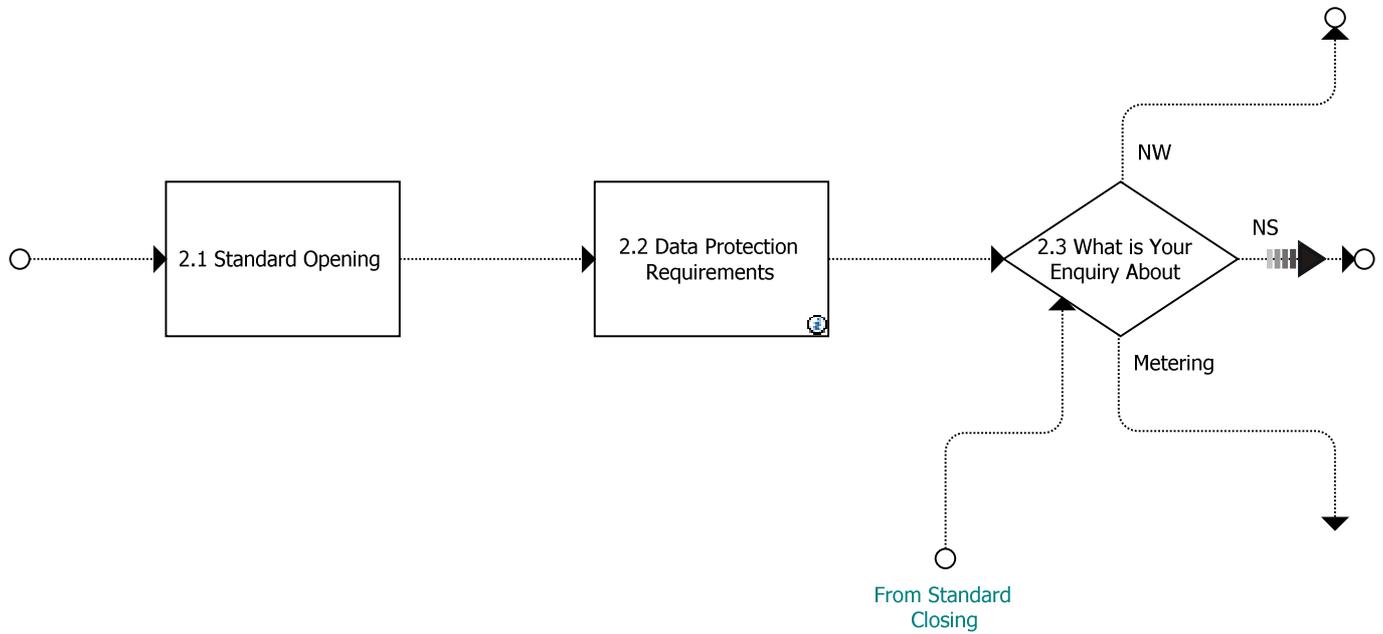
Main level Activities

Name	Type	Description	Owner
1.0 Customer Rings NI Water	Start of process		

2.0 Data Capture

\\2.0 Data Capture	Owner:
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This process covers the general opening and data protection activities



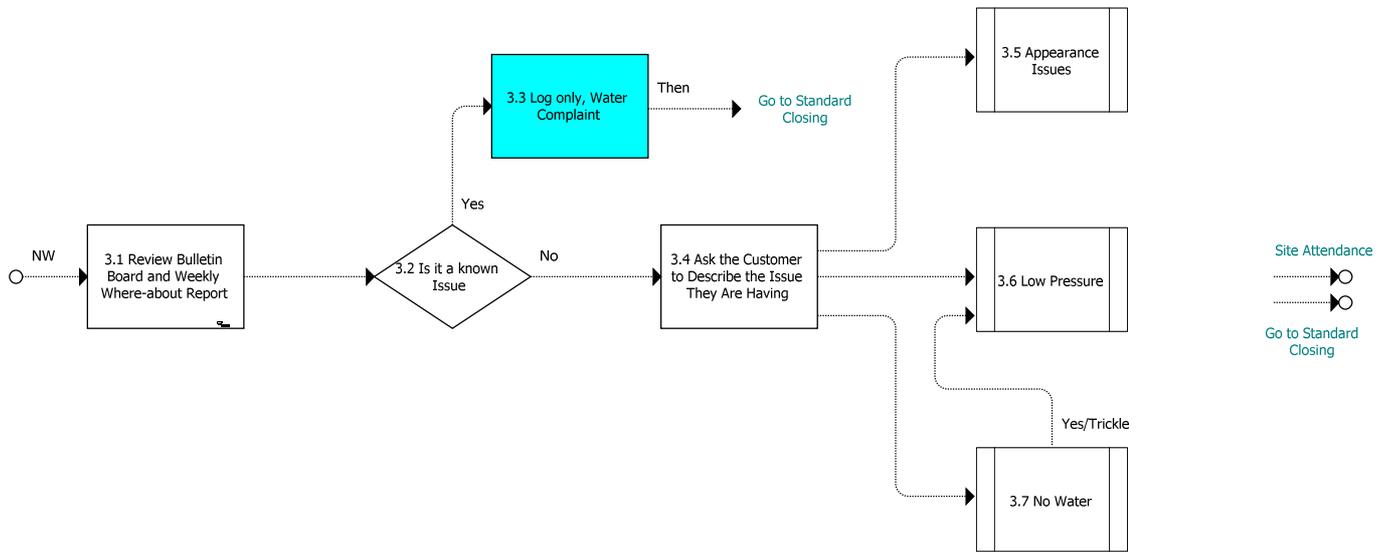
Activities

Name	Type	Description	Owner
2.1 Standard Opening	Activity	Greet the customer with the standard opening of: "Good morning/afternoon, Northern Ireland Water, You are speaking to....."	
2.2 Data Protection Requirements	Activity	Ensure that the following has been obtained: Name Address & postcode Telephone # (Ensure that it is updated on Rapid if not the same) Ref #	
2.3 What is Your Enquiry About	Decision	The agent will ask the customer what their call pertains to: NW - Network Water (Flooding, Blocked Sewer or Bad Smell) NS - Network Sewage Metering query	



3.0 Enquiry NW

\\2.0 Data Capture\3.0 Enquiry NW Owner:



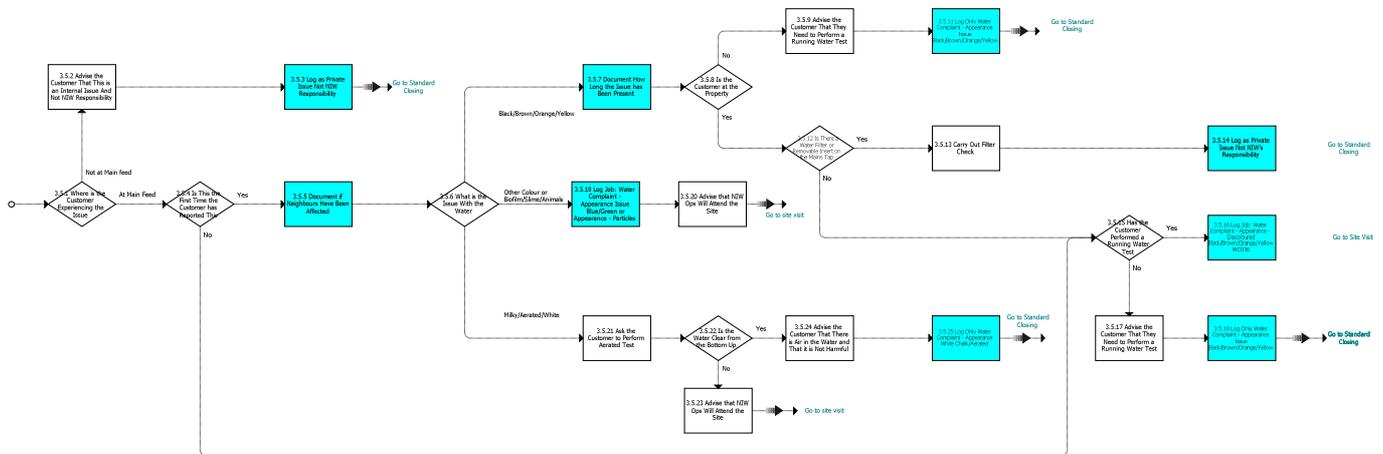
Activities

Name	Type	Description	Owner
3.1 Review Bulletin Board and Weekly Where-about Report	Activity	Identify any issues that may have an impact in the area. Note: a job cannot be logged at this point as the issue has not yet been established. Inform customer of the problem as per the information highlighted on the bulletin board/WWR and an expected resolution time. Advise the customer: 'We are aware of an ongoing operational incident in the area, we anticipate it will be resolved in.....' Do not provide details of the fault unnecessarily.	
3.2 Is it a known Issue	Decision		
3.3 Log only, Water Complaint	Rapid based process		
3.4 Ask the Customer to Describe the Issue They Are Having	Activity	CRC need to ask the customer to allocate to one of the following: Appearance Issues Low Pressure No Water	



3.5 Appearance Issues

\\2.0 Data Capture\3.0 Enquiry NW\3.5 Appearance Issues Owner:



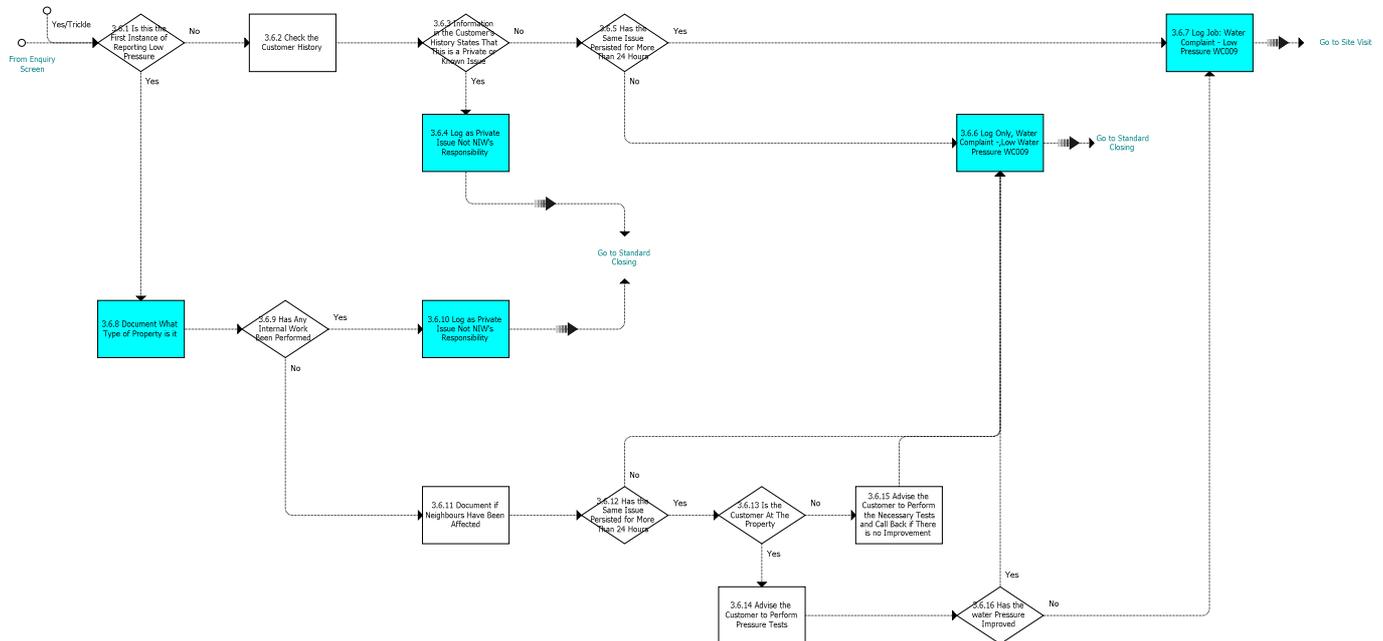
Activities

Name	Type	Description	Owner
3.5.1 Where is the Customer Experiencing the Issue	Decision	Is it at the main feed or at another location in the premises?	
3.5.2 Advise the Customer That This is an Internal Issue And Not NIW Responsibility	Activity	If the issue that is being experienced is NOT at the main inlet (usually the kitchen cold tap) then it is not NIW responsibility. NIW are only responsible for water at the main water supply.	
3.5.3 Log as Private Issue Not NIW Responsibility	Rapid based process		
3.5.4 Is This the First Time the Customer has Reported This	Decision	Customer may be ringing back after carrying out running water tests.	
3.5.5 Document if Neighbours Have Been Affected	Rapid based process		
3.5.6 What is the Issue With the Water	Decision		
3.5.7 Document How Long the Issue has Been Present	Rapid based process		
3.5.8 Is the Customer at the Property	Decision		
3.5.9 Advise the Customer That They Need to Perform a Running Water Test	Activity	Running Water Test: Run the water from the mains (usually cold kitchen tap) for one hour checking every ten minutes. The water should clear. If no improvement after one hour call back to arrange a site visit.	
3.5.10 Log Only Water Complaint - Appearance Issue Black/Brown/Orange/Yellow	Rapid based process		
3.5.11 Is There a Water Filter or Removable Insert on the Mains Tap	Decision		
3.5.12 Carry Out Filter Check	Activity	It is the customer's responsibility to confirm the filter system is serviceable before NI Water will go out to the customer's premises to investigate further.	
3.5.13 Log as Private Issue Not NIW's Responsibility	Rapid based process		
3.5.14 Has the Customer Performed a Running Water Test	Decision		
3.5.15 Log Job: Water Complaint - Appearance - Discoloured Black/Brown/Orange/Yellow WC036	Rapid based process		
3.5.16 Advise the Customer That They Need to Perform a Running Water Test	Activity	Running Water Test: Run the water from the mains (usually cold kitchen tap) for one hour checking every ten minutes. The water should clear. If no improvement after one hour call back to arrange a site visit.	

3.5.17 Log Only Water Complaint - Appearance Issue Black/Brown/Orange/Yellow	Rapid based process		
3.5.18 Log Job: Water Complaint - Appearance Issue Blue/Green or Appearance - Particles	Rapid based process	If the colour of the water is any other colour apart from black, brown, orange, yellow, milky or white log the job. Also if there is biofilm, slime or animals in the water log the contact for a site visit.	
3.5.19 Advise that NIW Ops Will Attend the Site	Activity	<p>Sample types:</p> <p>Note that a different sample type and sample container would be required for the following:</p> <p>Taste & Odour – Customer Complaint Sample bottle and Taste and Odour Sample.</p> <p>Lead – Lead Sample bottle.</p> <p>Corrosion – Corrosion Sample bottle.</p>	
3.5.20 Ask the Customer to Perform Aerated Test	Activity	<p>Aerated Water Test:</p> <p>Fill a glass with a sample of the water. If the glass of water clears from the bottom up this indicates there is air in the water.</p>	
3.5.21 Is the Water Clear from the Bottom Up	Decision		
3.5.22 Advise that NIW Ops Will Attend the Site	Activity	<p>Sample types:</p> <p>Note that a different sample type and sample container would be required for the following:</p> <p>Taste & Odour – Customer Complaint Sample bottle and Taste and Odour Sample.</p> <p>Lead – Lead Sample bottle.</p> <p>Corrosion – Corrosion Sample bottle.</p>	
3.5.23 Advise the Customer That There is Air in the Water and That it is Not Harmful	Activity		
3.5.24 Log Only Water Complaint - Appearance White Chalk/Aerated	Rapid based process		

3.6 Low Pressure

\\2.0 Data Capture\3.0 Enquiry NW\3.5 Appearance Issues\3.6 Low Pressure Owner:



Activities

Name	Type	Description	Owner
3.6.1 Is this the First Instance of Reporting Low Pressure	Decision		
3.6.2 Check the Customer History	Activity		
3.6.3 Information in the Customer's History States That This is a Private or Known Issue	Decision	The CRC needs to be proactive in checking the customer's details to see if there is a "conditional approval" on the premises. The agent should also refer to the DG2 register to understand if it is a known low pressure issue.	
3.6.4 Log as Private Issue Not NIW's Responsibility	Rapid based process	Advise the customer that this is a private issue and not NIW's responsibility.	
3.6.5 Has the Same Issue Persisted for More Than 24 Hours	Decision	The agent will obtain as much detail on when the issue occurs. Is it constant or only at certain times of the day? For example early morning or late afternoon.	
3.6.6 Log Only, Water Complaint - ,Low Water Pressure WC009	Rapid based process	Advise the customer that the issue should resolve itself but if they are experiencing low pressure for more than 24 hours they should ring back.	
3.6.7 Log Job: Water Complaint - Low Pressure WC009	Rapid based process		
3.6.8 Document What Type of Property is it	Rapid based process		
3.6.9 Has Any Internal Work Been Performed	Decision	This could be work carried out by a plumber.	
3.6.10 Log as Private Issue Not NIW's Responsibility	Rapid based process	Advise the customer that they are receiving water via the main. It may be advisable to check the internal structure and if all is ok to get back to NIW. If internal work has been carried advise the customer that the issue is most likely due to the person who performed work on the property and they should contact the person in order to resolve the issue.	
3.6.11 Document if Neighbours Have Been Affected	Activity		
3.6.12 Has the Same Issue Persisted for More Than 24 Hours	Decision		
3.6.13 Is the Customer At The Property	Decision		



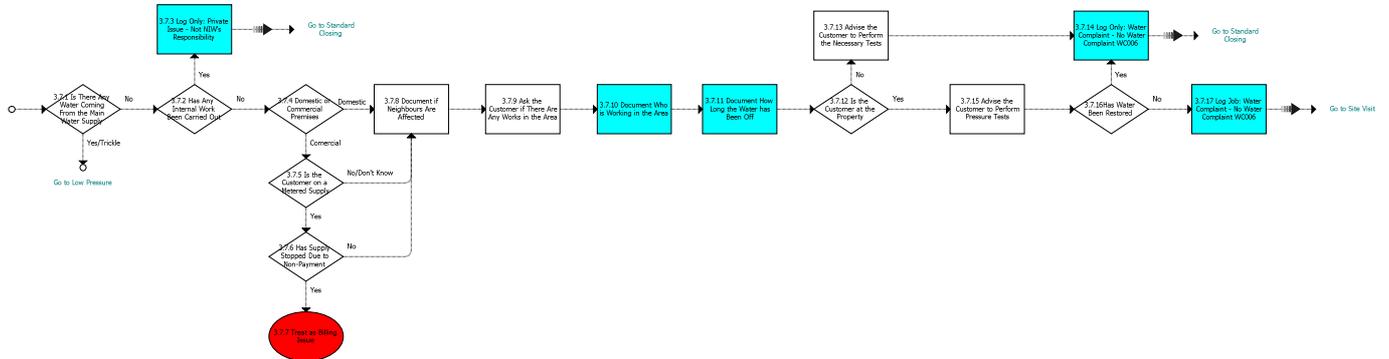
CRC Scripts

3.6.14 Advise the Customer to Perform Pressure Tests	Activity	Ask the customer to perform the following tests - stop valve test (usually located under the kitchen sink). Turn off and on 3 times. Note clockwise is closing the valve. - Removal of tap filter (if fitted) - Switching off appliances that require water (washing machine, dish washer, shower etc)	
3.6.15 Advise the Customer to Perform the Necessary Tests and Call Back if There is no Improvement	Activity	Customer should try the following tests: Check storage tank Stop valve test Remove filter/insert Appliances requiring water Note: the call handler should provide details on what each the tests involve	
3.6.16 Has the water Pressure Improved	Decision	Have the previous tests improve the pressure of the water?	



3.7 No Water

\\2.0 Data Capture\3.0 Enquiry NW\3.5 Appearance Issues\3.6 Low Pressure\3.7 No Water Owner:



Activities

Name	Type	Description	Owner
3.7.1 Is There Any Water Coming From the Main Water Supply	Decision	Is there any water coming into the property through the mains? The main water supply into a house is usually the cold kitchen tap If there is even a little water coming through the main this is not a 'No Water' issue it is a 'Low Pressure' issue	
3.7.2 Has Any Internal Work Been Carried Out	Decision	Has the customer recently had any plumbing work/repairs carried out?	
3.7.3 Log Only: Private Issue - Not NIW's Responsibility	Rapid based process	Inform the customer that it is probable that this is an internal issue and to do with what work has been carried out by the person who performed the work. Advise them that they should contact the individual to carry out a check of their work.	
3.7.4 Domestic or Commercial Premises	Decision		
3.7.5 Is the Customer on a Metered Supply	Decision	The customer may have their supply turned off due to late or lack of payment.	
3.7.6 Has Supply Stopped Due to Non-Payment	Decision	Check Rapid to see if the supply has been stopped due to non-payment.	
3.7.7 Treat as Billing Issue	End of process	Advise the customer that the supply has been stopped due to non-payment.	
3.7.8 Document if Neighbours Are Affected	Activity		
3.7.9 Ask the Customer if There Are Any Works in the Area	Activity	There could be work being carried out by the following: Road Service NIE NIW (not on bulletin board) Neighbours Note: a job cannot be logged at this point as the issue has not yet been established	
3.7.10 Document Who is Working in the Area	Rapid based process		
3.7.11 Document How Long the Water has Been Off	Rapid based process		
3.7.12 Is the Customer at the Property	Decision		
3.7.13 Advise the Customer to Perform the Necessary Tests	Activity	Ask the customer to perform the following tests - Removal of tap filter (if fitted) - Switching off appliances that require water (washing machine, dish washer, shower etc) If there is no improvement after performing these tests advise the customer to call back.	

CRC Scripts

3.7.14 Log Only: Water Complaint - No Water Complaint WC006	Rapid based process		
3.7.15 Advise the Customer to Perform Pressure Tests	Activity	Ask the customer to perform the following tests - Removal of tap filter (if fitted) - Switching off appliances that require water (washing machine, dish washer, shower etc)	
3.7.16 Has Water Been Restored	Decision	Has the previous tests allowed the water to return to the property?	
3.7.17 Log Job: Water Complaint - No Water Complaint WC006	Rapid based process		



4.0 Enquiry NS

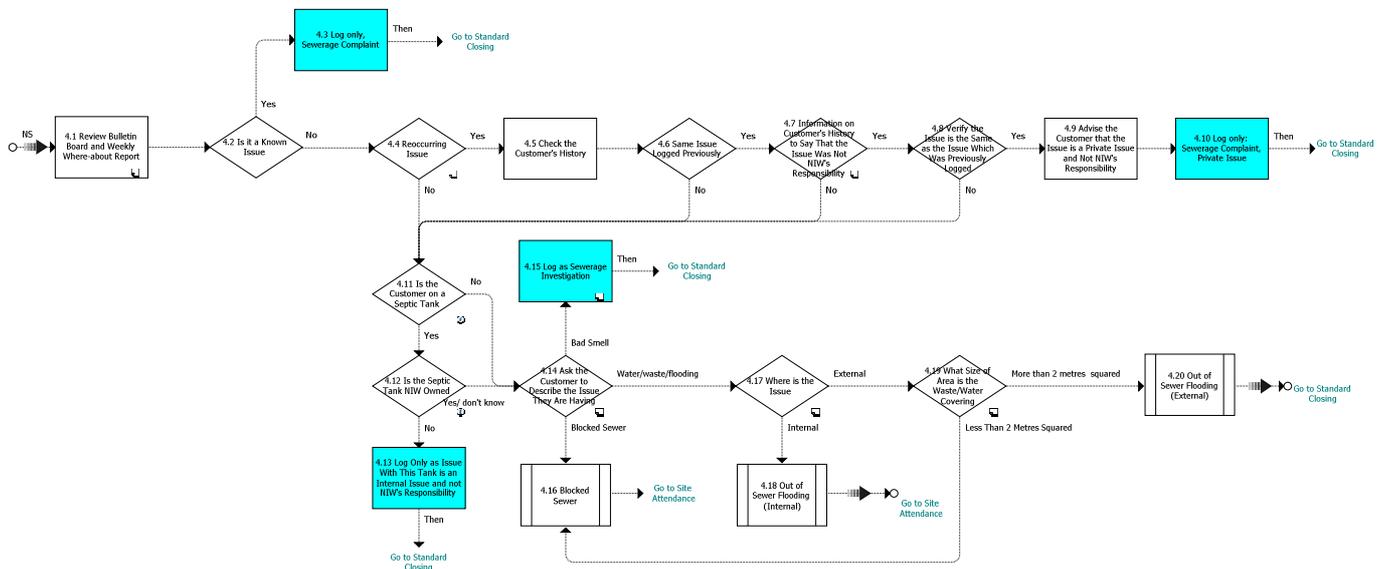
\\2.0 Data Capture\3.0 Enquiry NW\4.0 Enquiry NS	Owner:
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This covers customer's complaints on:

Blocked sewer

Internal flooding

External flooding



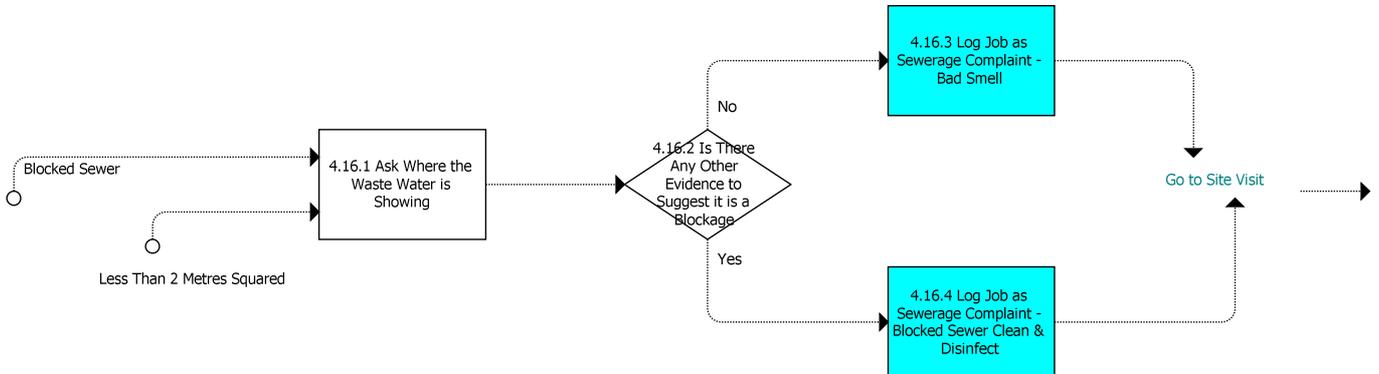
Activities

Name	Type	Description	Owner
4.1 Review Bulletin Board and Weekly Where-about Report	Activity	Identify any issues that may have an impact in the area. Note: a job cannot be logged at this point as the issue has not yet been established. Inform customer of the problem as per the information highlighted on the bulletin board/WWR and an expected resolution time. Advise the customer: 'We are aware of an ongoing operational incident in the area, we anticipate it will be resolved in.....' Do not provide details of the fault unnecessarily.	
4.2 Is it a Known Issue	Decision		
4.3 Log only, Sewerage Complaint	Rapid based process		
4.4 Reoccurring Issue	Decision	A reoccurring issue is an issue which presents itself again within one month. A repeat issue is an issue which presents itself again within 14 days. An issue which presents itself in 12 months or over is classified as a new issue.	
4.5 Check the Customer's History	Activity		
4.6 Same Issue Logged Previously	Decision		

4.7 Information on Customer's History to Say That the Issue Was Not NIW's Responsibility	Decision	The Customer Field Manager should be able to advise on areas that have know issues. Please check the Memo info icon for background information. The CRC should be proactive in ensuring that the relevant CFM/FM is aware of reoccurring complaints from same address/area.	
4.8 Verify the Issue is the Same as the Issue Which Was Previously Logged	Decision		
4.9 Advise the Customer that the Issue is a Private Issue and Not NIW's Responsibility	Activity		
4.10 Log only: Sewerage Complaint, Private Issue	Rapid based process		
4.11 Is the Customer on a Septic Tank	Decision		
4.12 Is the Septic Tank NIW Owned	Decision		
4.13 Log Only as Issue With This Tank is an Internal Issue and not NIW's Responsibility	Rapid based process		
4.14 Ask the Customer to Describe the Issue They Are Having	Decision	CRC need to ask the customer to allocate to one of the following: Any form of flooding Blocked sewer Bad odour There is also a need to document if the toilets are affected by the issue Is the customer close to a treatment works	
4.15 Log as Sewerage Investigation	Rapid based process	Need to ensure that the notes state that it is a bad smell that needs investigated.	
4.17 Where is the Issue	Decision	NEED TO DOCUMENT THE FOLLOWING: Internal:- House, attached garage, floorboards or air vents Toilet Overflowing Sink/Shower/Bath backing up and overflowing Flooding on floor External:- Manhole Gully Detached garage	
4.19 What Size of Area is the Waste/Water Covering	Decision	Over 2 metres squared around a manhole = flooding, if within these measures it will be classified as a blockage (2 metres squared = approx the length of a car). Ensure that the issue relates to flooding and not a blockage.	

4.16 Blocked Sewer

\\2.0 Data Capture\3.0 Enquiry NW\4.0 Enquiry NS\4.16 Blocked Sewer Owner:



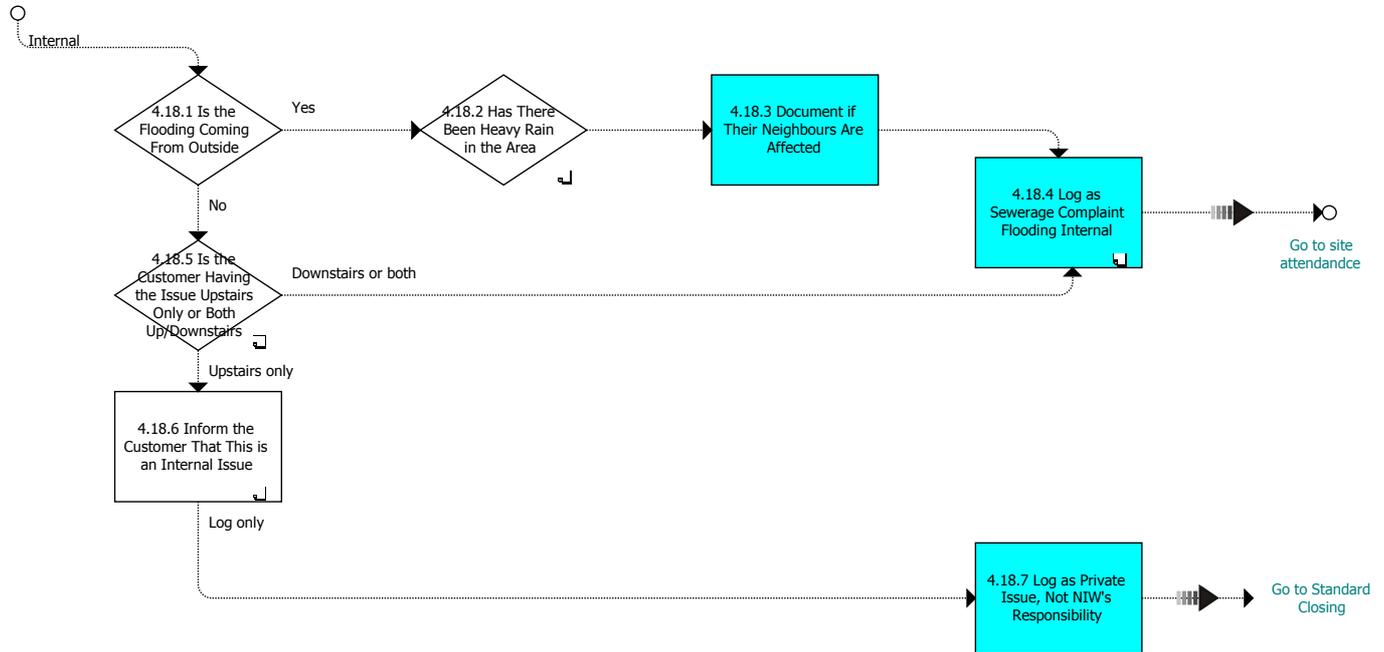
Activities

Name	Type	Description	Owner
4.16.1 Ask Where the Waste Water is Showing	Activity		
4.16.2 Is There Any Other Evidence to Suggest it is a Blockage	Decision	Toilet/sink backing up. Toilet taking a length of time to flush etc. Is it upstairs or both/downstairs?	
4.16.3 Log Job as Sewerage Complaint - Bad Smell	Rapid based process		
4.16.4 Log Job as Sewerage Complaint - Blocked Sewer Clean & Disinfect	Rapid based process		



4.18 Out of Sewer Flooding (Internal)

\\2.0 Data Capture\3.0 Enquiry NW\4.0 Enquiry NS\4.16 Blocked Sewer\4.18 Out of Sewer Flooding (Internal)	Owner:
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Activities

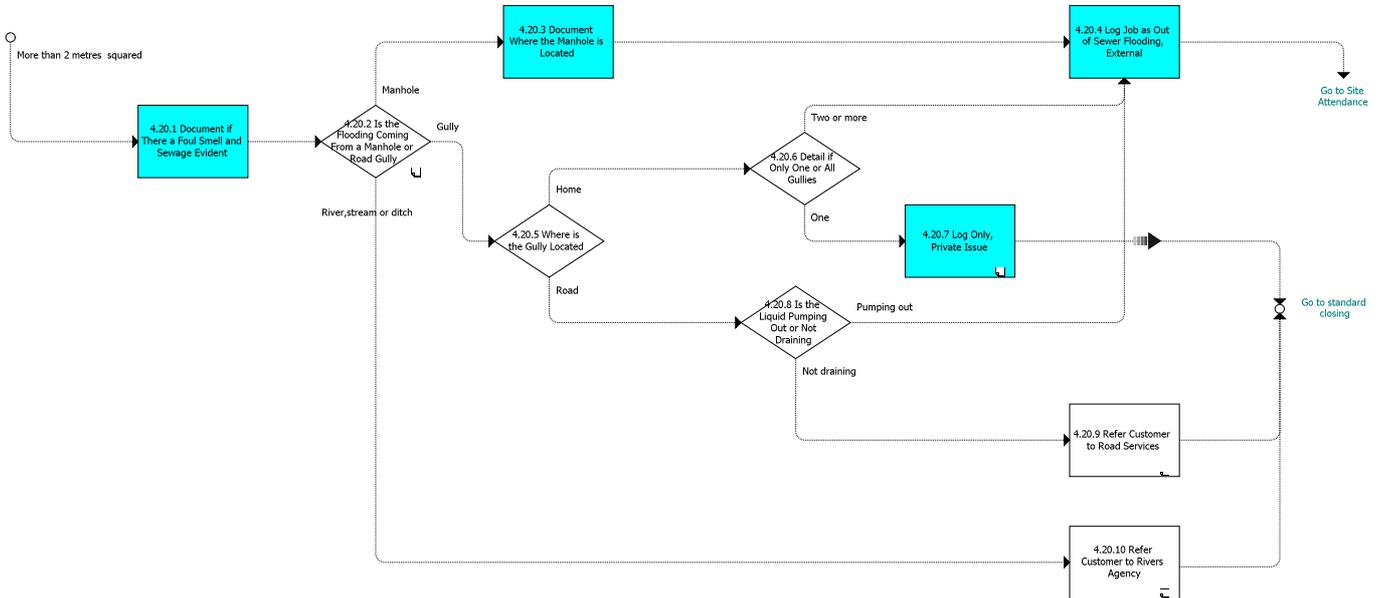
Name	Type	Description	Owner
4.18.1 Is the Flooding Coming From Outside	Decision		
4.18.2 Has There Been Heavy Rain in the Area	Decision	Due to heavy rain customer may experience unusual amounts of water gathering in their garden as the gullies on their property may be backing up.	
4.18.3 Document if Their Neighbours Are Affected	Rapid based process		
4.18.4 Log as Sewerage Complaint Flooding Internal	Rapid based process	<p>Only log an Internal Flooding Job if the call falls into the following criteria...</p> <p>The flooding is inside the property from either</p> <ul style="list-style-type: none"> a) overflowing toilet b) external source e.g. external overflowing manhole (access chamber) <p>Causing DAMAGE to the CONTENTS of the property e.g. carpets, furniture, floors etc</p> <p>To determine and assist your decision on how to log this ask this question-</p> <p>Is there any damage to your property, perhaps damage to flooring, carpets or furniture? Add this to your eGain script for these types of calls. If yes log Internal Flooding Job</p>	
4.18.5 Is the Customer Having the Issue Upstairs Only or Both Up/Downstairs	Decision	CRC needs to document exactly where the flooding is coming in from.	
4.18.6 Inform the Customer That This is an Internal Issue	Activity	Toilet on a 2nd story should not flood because it should escape through a gully or manhole.	
4.18.7 Log as Private Issue, Not NIW's Responsibility	Rapid based process		



4.20 Out of Sewer Flooding (External)

\\2.0 Data Capture\3.0 Enquiry NW\4.0 Enquiry NS\4.16 Blocked Sewer\4.18 Out of Sewer Flooding (Internal)\4.20 Out of Sewer Flooding (External)

Owner:



Activities

Name	Type	Description	Owner
4.20.1 Document if There a Foul Smell and Sewage Evident	Rapid based process		
4.20.2 Is the Flooding Coming From a Manhole or Road Gully	Decision	<p>NEED TO DOCUMENT EXACTLY THE STATE OF THE FLOODING</p> <p>For gully</p> <p>Is it coming out of a gully?</p> <p>Is it liquid flowing over the gully or not getting into the gully?</p> <p>Is there any evidence of sewerage?</p> <p>For manholes:</p> <p>Is it coming out of the manhole?</p> <p>Where is the manhole?</p> <p>May also be coming from a river, stream or ditch.</p> <p>External flooding is coming onto the floor caused by a gully or manhole.</p> <p>Internal flooding</p> <p>Toilet Overflowing</p> <p>Sink/Shower/Bath backing up and overflowing</p> <p>Flooding on floor</p> <p>If there is backing up BUT not overflowing please treat this as a blockage.</p>	
4.20.3 Document Where the Manhole is Located	Rapid based process		
4.20.4 Log Job as Out of Sewer Flooding, External	Rapid based process		
4.20.5 Where is the Gully Located	Decision		

CRC Scripts

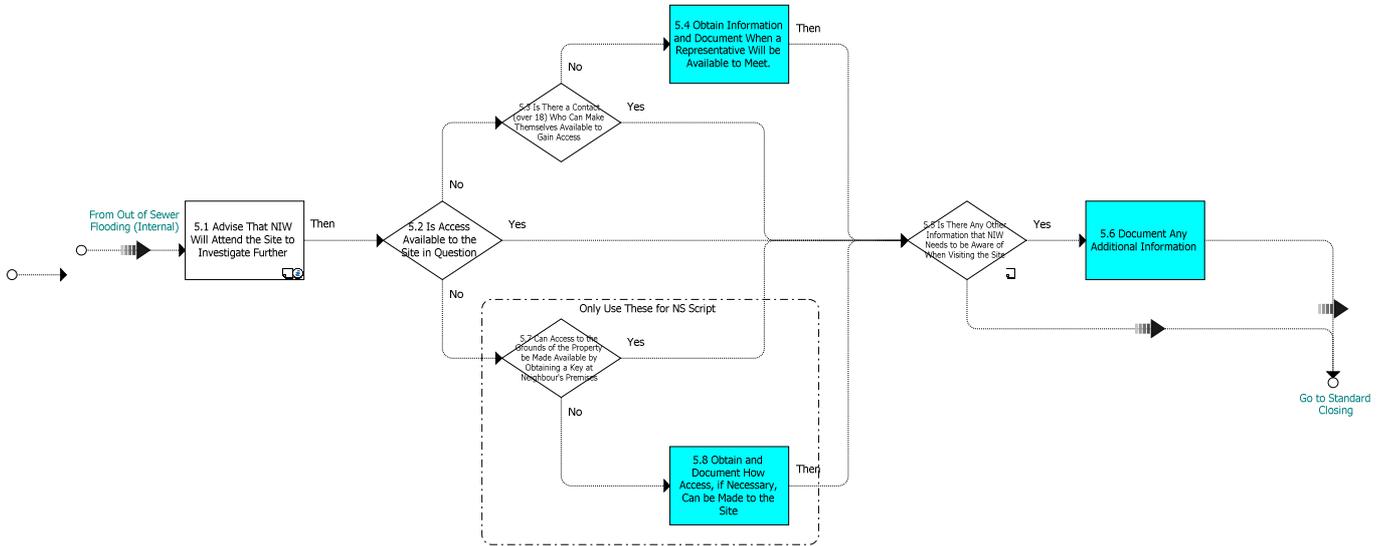
4.20.6 Detail if Only One or All Gullies	Decision		
4.20.7 Log Only, Private Issue	Rapid based process	All gullies are connected to the same pipe so unlikely to be NIW issue. Ask customer to check if there is no leaves or such around/in/on gully.	
4.20.8 Is the Liquid Pumping Out or Not Draining	Decision		
4.20.9 Refer Customer to Road Services	Activity		
4.20.10 Refer Customer to Rivers Agency	Activity		



5.0 Site Attendance

\\2.0 Data Capture\3.0 Enquiry NW\4.0 Enquiry NS\5.0 Site Attendance	Owner:
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Information needed for when NIW can visit customer's premises.



Activities

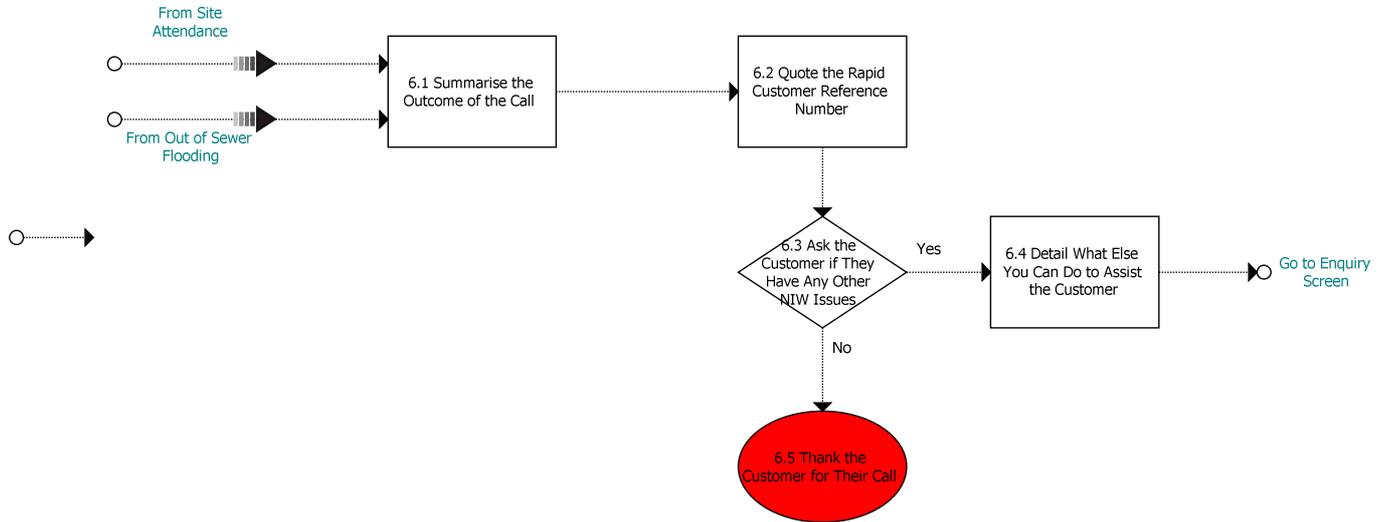
Name	Type	Description	Owner
5.1 Advise That NIW Will Attend the Site to Investigate Further	Activity	<p>FLOODING INTERNAL SITE ATTENDANCE GUIDANCE: NIW aim to ATTEND the issue within 4 hours.</p> <p>FLOODING EXTERNAL SITE ATTENDANCE GUIDANCE: NIW aim to resolve the issue within 24 hours.</p> <p>Please note: this is subject to change during high volume/ major incident cases will be prioritised.</p> <p>For further information on the above refer to the attached Customer Charter and Customer Advice attachments.</p>	
5.2 Is Access Available to the Site in Question	Decision	Agent needs to ensure that the customer will be present at the site.	
5.3 Is There a Contact (over 18) Who Can Make Themselves Available to Gain Access	Decision	Need to get a name and phone number.	
5.4 Obtain Information and Document When a Representative Will be Available to Meet.	Rapid based process		
5.5 Is There Any Other Information that NIW Needs to be Aware of When Visiting the Site	Decision	<p>Are there dogs in the garden</p> <p>Locked gates</p> <p>Alley gates</p>	
5.6 Document Any Additional Information	Rapid based process		
5.7 Can Access to the Grounds of the Property be Made Available by Obtaining a Key at Neighbour's Premises	Decision		
5.8 Obtain and Document How Access, if Necessary, Can be Made to the Site	Rapid based process		



6.0 Standard Closing

\\2.0 Data Capture\3.0 Enquiry NW\4.0 Enquiry NS\5.0 Site Attendance\6.0 Standard Closing | Owner:

How each customer's call should finish.



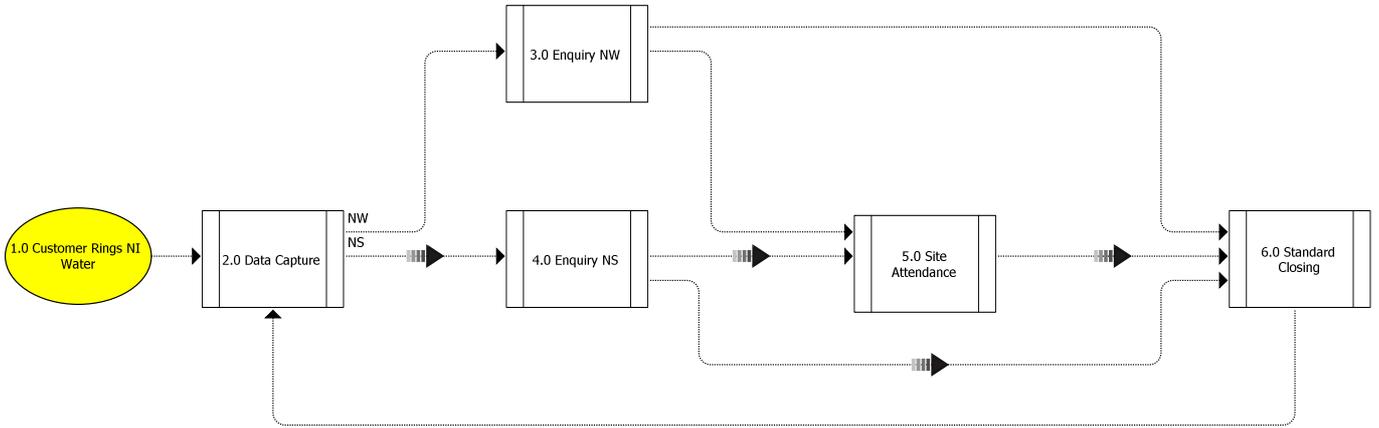
Activities

Name	Type	Description	Owner
6.1 Summarise the Outcome of the Call	Activity	Say to the customer "To confirm we have agreed that....."	
6.2 Quote the Rapid Customer Reference Number	Activity	Ensure the customer obtains a customer reference number for any further queries they may have.	
6.3 Ask the Customer if They Have Any Other NIW Issues	Decision	Say to the customer "Is there anything else I can help you with today?"	
6.4 Detail What Else You Can Do to Assist the Customer	Activity		
6.5 Thank the Customer for Their Call	End of process	Say to the customer "Thank you for calling Northern Ireland Water. You have been speaking to..... Good bye"	

CRC Scripts

\\2.0 Data Capture\3.0 Enquiry NW\4.0 Enquiry NS\5.0 Site Attendance\6.0 Standard Closing\CRC Scripts	Owner:
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This process covers scripts that are used within the CRC to aid agents in diagnostics for Operational customer calls.



APPENDIX A - Organization unit hierarchy

Name	Type	Description
Account Services	[Empty]	Receive and sort all written, e-mail, fax or verbal correspondences from CRC. Forwards requests to appropriate CRC department for resolution.
CRC	[Empty]	The Customer Relations Centre based at Capital House manages billing and operational queries from our customers and further enhances the service we are able to provide in responding to queries and resolving service issues. Staff in the Customer Relations Centre record details and the nature of all enquiries, requests for services, emergencies and complaints. All enquiries etc. are logged and routed directly to staff that will investigate the matter and resolve the problem as quickly as possible.
Customer	[Empty]	The individual or organization, external to the producing organisation that receives the product.
WCC	[Empty]	Work Control Centre

APPENDIX B - Information item hierarchy

Name	Type	Location	Description
Customer Advice	Formal Document	C:\NIW\One Programme\Customer Interface Proj\Scripts\Customer Advice.JPG	
Customer Charter	Formal Document	C:\NIW\One Programme\Customer Interface Proj\Scripts\Customer Charter.JPG	
Data Protection Query		C:\NIW\One Programme\Customer Interface Proj\Scripts\Quality calls and data capture.pdf	
NI Water Septic Tank Data	Informal Document	C:\NIW\One Programme\Customer Interface Proj\Scripts\Operational Septic Tanks.xls	
Process Support Document for Septic Tanks	Formal Document	C:\Documents and Settings\antlait\My Documents\Projektit\SERVICES\NIW\Visio import\NIW models\Septic Tank PSD v1.0.doc	

APPENDIX C - Notes hierarchy

Name	Description
Additional Info	<p>Are there dogs in the garden</p> <p>Locked gates</p> <p>alley gates</p>
Area detail	<p>Over 2 metres squared around a manhole = flooding, if within these measures it will be classified as a blockage (2 metres squared = approx the length of a car).</p> <p>Ensure that the issue relates to flooding and not a blockage.</p>
Area info	<p>Identify any issues that may have an impact in the area. Note: a job cannot be logged at this point as the issue has not yet been established.</p> <p>Inform customer of the problem as per the information highlighted on the bulletin board/WWR and an expected resolution time.</p> <p>Advise the customer: 'We are aware of an ongoing operational incident in the area, we anticipate it will be resolved in.....' Do not provide details of the fault unnecessarily.</p>
Area info	<p>Identify any issues that may have an impact in the area. Note: a job cannot be logged at this point as the issue has not yet been established.</p> <p>Inform customer of the problem as per the information highlighted on the bulletin board/WWR and an expected resolution time.</p> <p>Advise the customer: 'We are aware of an ongoing operational incident in the area, we anticipate it will be resolved in.....' Do not provide details of the fault unnecessarily.</p>
CRC Feedback	<p>The CRC should be proactive in ensuring that the relevant CFM/FM is aware of reoccurring complaints from same address/area.</p> <p>Process to be established</p>
Definition of reoccurring	<p>A reoccurring issue is an issue which presents itself again within one month. A repeat issue is an issue which presents itself again within 14 days. An issue which presents itself in 12 months or over is classified as a new issue.</p>
Document info needed	<p>NEED TO DOCUMENT EXACTLY THE STATE OF THE FLOODING</p> <p>For gully</p> <p>Is it coming out of a gully?</p> <p>Is it liquid flowing over the gully or not getting into the gully?</p> <p>Is there any evidence of sewerage?</p> <p>For manholes:</p> <p>Is it coming out of the manhole?</p> <p>Where is the manhole?</p> <p>May also be coming from a river, stream or ditch</p>
Document info	<p>CRC needs to document exactly where the flooding is coming in from.</p>
Explain why	<p>All gullies are connected to the same pipe so unlikely to be NIW issue.</p> <p>Ask customer to check if there is no leaves or such around/in/on gully.</p>
Fault desc	<p>Need to ensure that the notes state that it is a bad smell that needs investigated.</p>
Flooding definition	<p>External flooding is coming onto the floor caused by a gully or manhole.</p> <p>Internal flooding</p> <p>Toilet Overflowing</p> <p>Sink/Shower/Bath backing up and overflowing</p> <p>Flooding on floor</p> <p>If there is backing up BUT not overflowing please treat this as a blockage.</p>
Heavy rain	<p>Due to heavy rain customer may experience unusual amounts of water gathering in their garden as the gullies on their property may be backing up.</p>

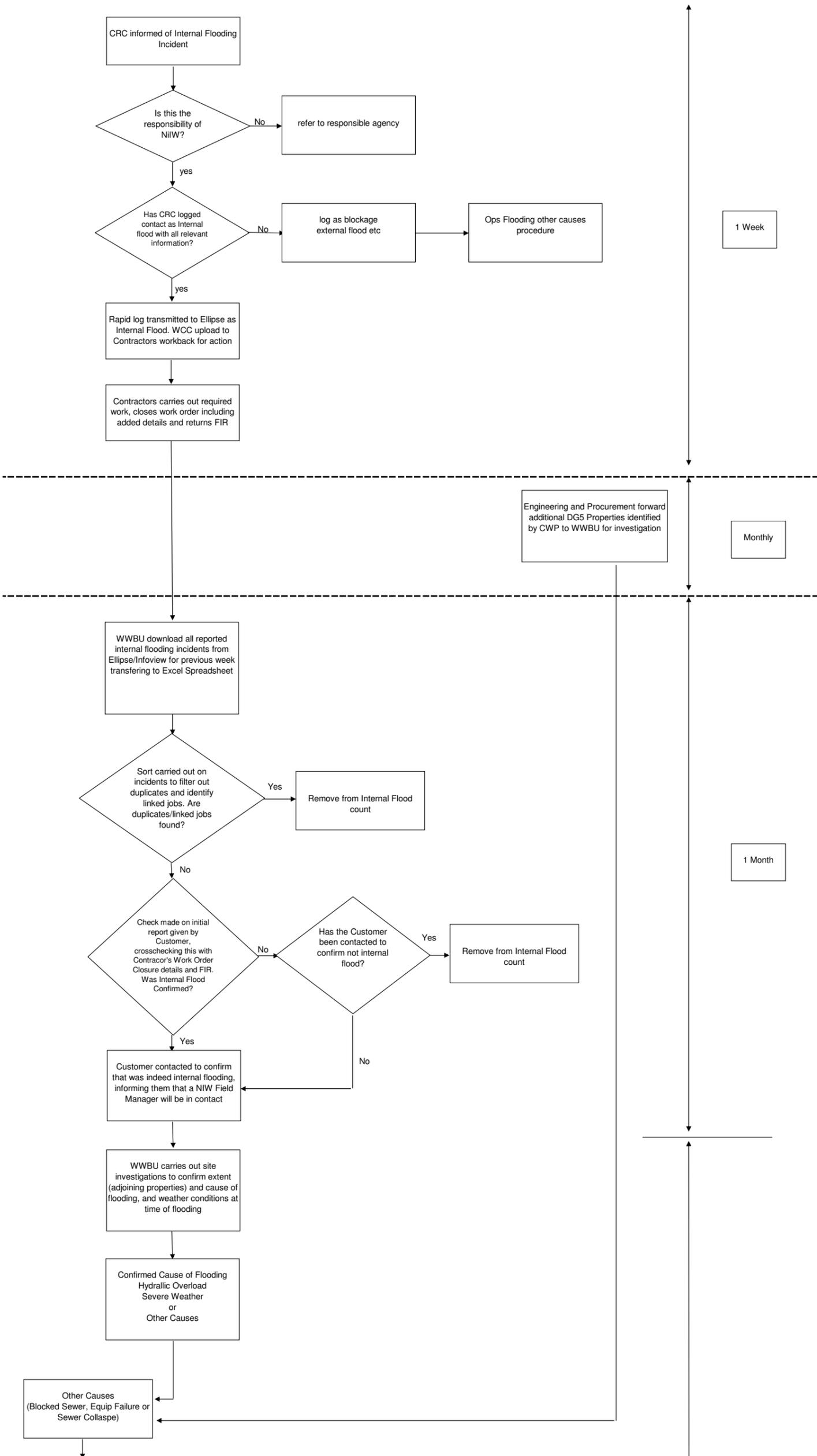
Information required	<p>Document type of internal flooding:</p> <p>Flooding limited to inhabited cellars i.e. house</p> <p>Flooding NOT limited to uninhabited cellars i.e. garage</p> <p>Is the garage attached to the house? If not then is regarded as EXTERNAL flooding. Log job as External flooding.</p>
Internal & external description	<p>NEED TO DOCUMENT THE FOLLOWING:</p> <p>Internal:- House, Garage, floorboards or air vents Toilet Overflowing Sink/Shower/Bath backing up and overflowing Flooding on floor</p> <p>External:- Manhole Gully Detached garage</p>
Internal/external SLA info	<p>FLOODING INTERNAL SITE ATTENDANCE GUIDANCE: NIW aim to ATTEND the issue within 4 hours.</p> <p>FLOODING EXTERNAL SITE ATTENDANCE GUIDANCE: NIW aim to resolve the issue within 24 hours.</p> <p>Please note: this is subject to change during high volume/ major incident cases will be prioritised.</p> <p>For further information on the above refer to the attached Customer Charter and Customer Advice attachments.</p>
Questions to ask	<p>CRC need to ask the customer to allocate to one of the following:</p> <p>Any form of flooding</p> <p>Blocked sewer</p> <p>Bad odour</p> <p>There is also a need to document if the toilets are affected by the issue</p> <p>Is the customer close to a treatment works</p>
Rivers Agency phone number	Obtain phone number Anton to provide details Plus Floodline
Road Services Contact Details	Obtain contact details Anton to provide details
Why is it private issue	Toilet on a 2nd story should not flood because it should escape through a gully or manhole.

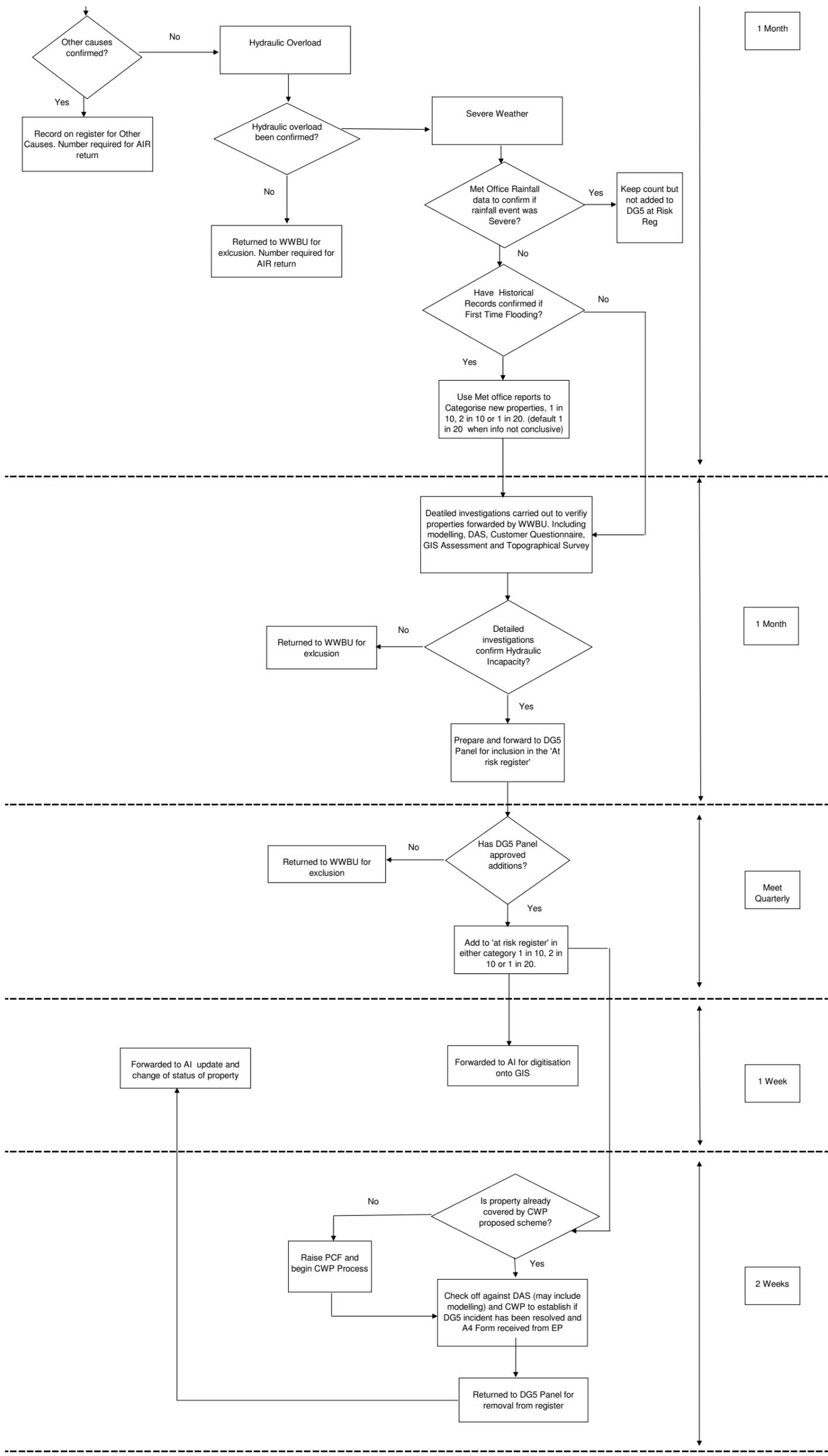
APPENDIX D - Resources hierarchy

Name	Type	Description
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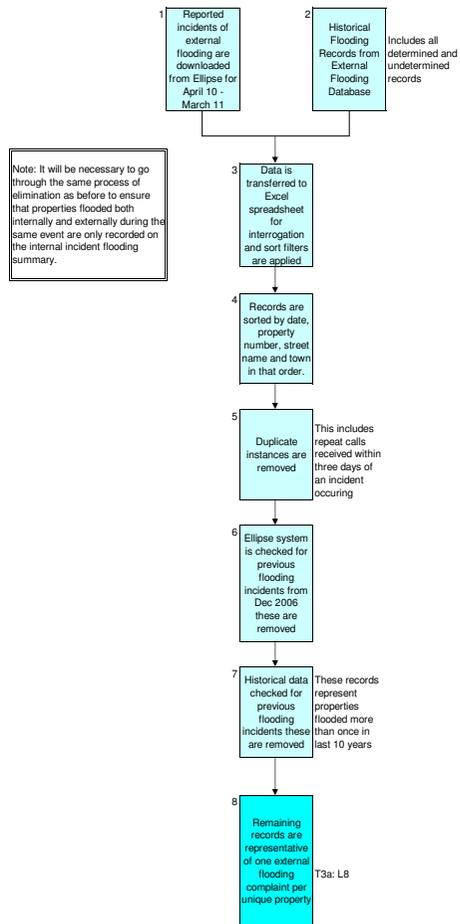
DG5 Data Internal Flooding Process



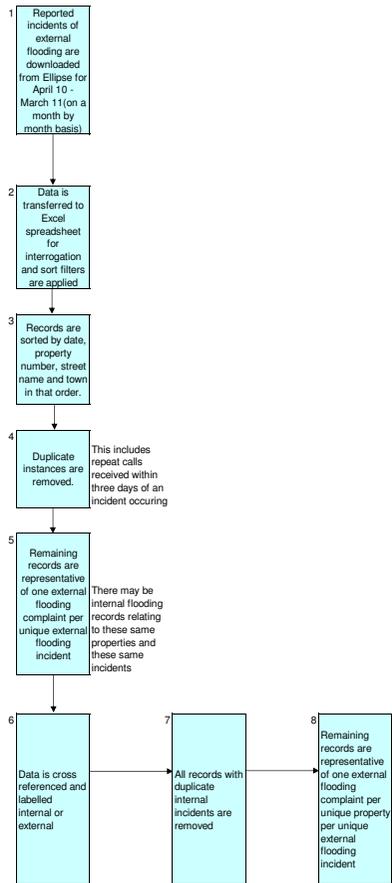


Appendix E

PROCESS FLOW DIAGRAM FOR TABLE 3A: LINE 8
(TO BE READ IN CONJUNCTION WITH LINE-SPECIFIC METHODOLOGY)



PROCESS FLOW DIAGRAM (PART 1) FOR TABLE 3A: LINES 1, 2, 3, 4, 5, 6, 7, 9, 10 & 11
(TO BE READ IN CONJUNCTION WITH LINE-SPECIFIC METHODOLOGIES)



PROCESS FLOW DIAGRAM (PART 2) FOR TABLE 3A: LINES 1, 2, 3, 4, 5, 6, 6a, 7, 9, 10 & 11
 (TO BE READ IN CONJUNCTION WITH LINE-SPECIFIC METHODOLOGIES)

1
 Remaining records are representative of one external flooding complaint per unique property per unique external flooding incident

There are no internal flooding records relating to these same properties and these same incidents

WWBU carry out investigations to determine the cause of flooding incident
 (This is done by a number of methods (Ellipse history, FIR's, Customer & Field Manager contact))

Remaining records are representative of one external flooding complaint per unique property
 T3a: L1 & 7

Remaining records are representative of one external flooding complaint per unique property
 T3a: L2, 3, 4, 5, 6, 9, 10 & 11

Overloaded Sewer Records
 T3a: L1

M&E Failure Records

Blocked Sewer Records

Collapsed Sewer Records

Collapsed Sewer Records
 T3a: L7

Incidents related to Overloaded Sewers (attributed to severe weather)
 T3a: L6

Incidents related to Overloaded Sewers (not attributed to severe weather)
 T3a: L5

Incidents related to M & E Failures
 T3a: L9

Incidents related to Blocked Sewers
 T3a: L10

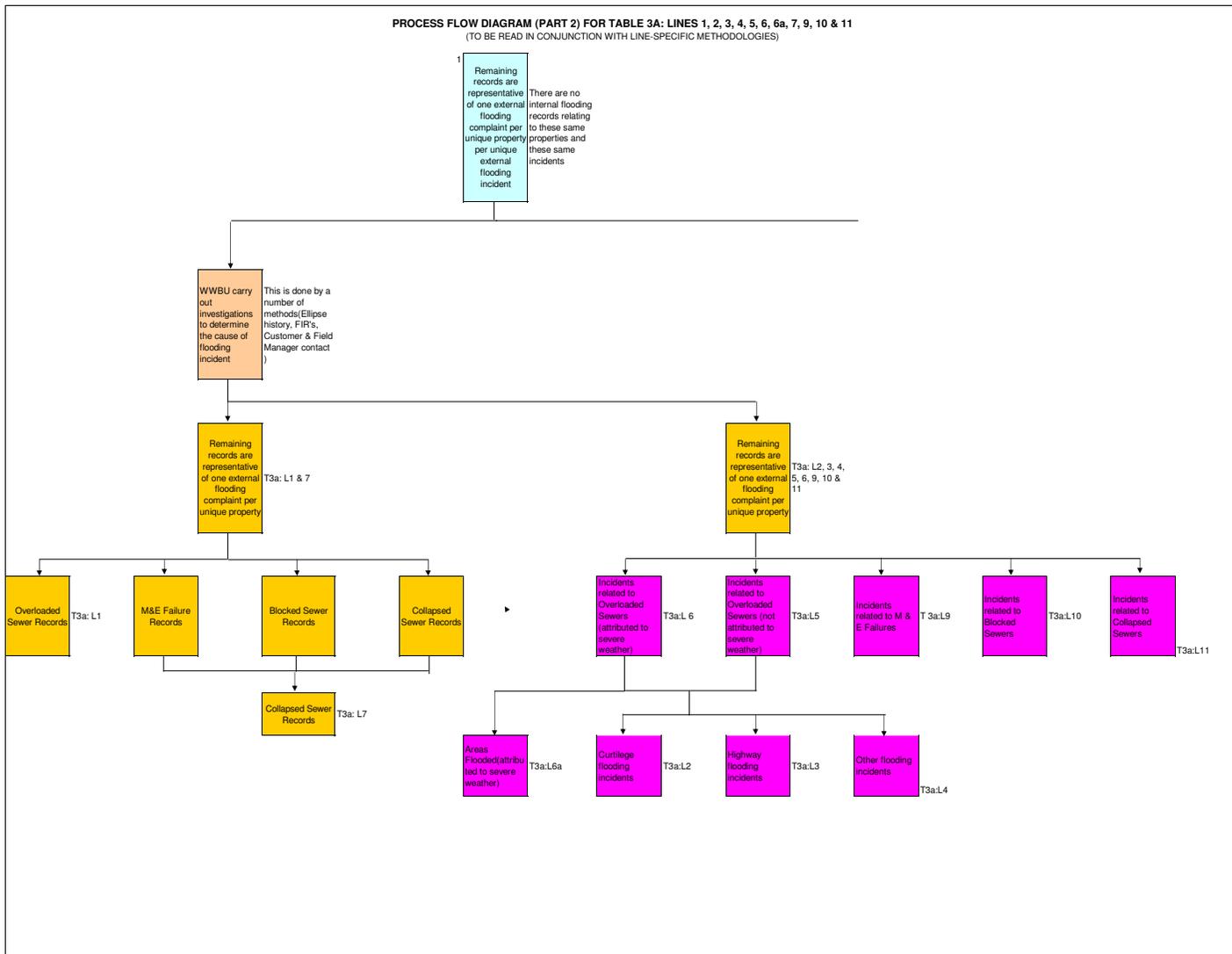
Incidents related to Collapsed Sewers
 T3a: L11

Areas Flooded (attributed to severe weather)
 T3a: L6a

Curtilege flooding incidents
 T3a: L2

Highway flooding incidents
 T3a: L3

Other flooding incidents
 T3a: L4



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):

- Telephone Contact (go to step 4) or Documentation received (in Capital House)
- Documentation opened by the Payment Processing Team and passed to the Account Services Customer Support Team (became NIW staff w.e.f. 1/12/10)
- Scan and Index (documentation only which is archived after scanning)
- Raise and allocate CMS contact type
- Assess and Investigate
- 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.

NIW received clarification from both the Reporter and NIAUR near the end of the reporting year that telephone complaints which relate to billing should be included as DG6 contacts. NIW will identify any such contacts from both the Received and Closed year end data extraction process, based on Billing CMS Codes. These volumes will then be included in the overall DG6 calculations.

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.

Multiple Accounts

NIW received clarification from the Regulator as to how contacts from customer 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 and the response time is also included in that year's information although it may continue into the following year.

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.

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 from RapidXtra 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. After 1st December 2010, responsibility for monitoring and measurement of written DG6 contacts became the responsibility of NIW.

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. After 1st December 2010, responsibility for monitoring and measurement of written DG6 contacts became the responsibility of NIW. At year end reports are validated and analysed at operational level.

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 aim to re-instate call listening from January 2011 and a random selection of calls made will be assessed:

- 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 will be reported to Echo management.

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. From 1st December 2010, NIW assumed responsibility for this process.

All contacts received should be recorded on Rapid. Reports from Rapid are generated by Echo and are used to report on DG6 performance.

Changes in system during the report year

There have been no reported system changes agreed with NIW since the previous reporting period.

Actual data

Actual data is extracted from the billing system RapidXtra. CorVu “5.1 All Contacts with Date Range EXTRACT” is used to calculate the total number of DG6 contacts received (table 4, line 1) and Rapid “DG6 Billing Analysis NIW” 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 - RESPONSE TO WRITTEN COMPLAINTS

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. From 1st December 2010 NIW took sole management of the former Echo Account Services (AS) Department. The AS Customer Support Team within this department scan, log & index documentation whilst the AS Complaints & Exec Mail Team respond to DG7 complaints.

- 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 and scanned, logged & indexed by Customer Support Team
- CMS contact raised to Complaints Team inbox in RapidXtra (Customer Billing & Contact Management System)
- Pass to NIW Triage Team for Assessment (from 1st April 2010 – 30th November 2010)
- Triage Team confirm DG7 categorisation (from 1st April 2010 – 30th November 2010)
- AS Complaints & Exec Mail Team member assesses complaint (from 1st December 2010), responding to those not requiring case management
- Allocate contacts requiring case management to AS Complaints & Exec Mail Team
- AS Complaints & Exec Mail Team investigate and case manage complaint
- Pass to relevant part of the business for investigation and resolution
- Review information provided by field, update accounts, draft and 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 2010. All incoming written correspondence is passed to the AS Department. It is then sifted and allocated to operational correspondence, payment notification, DG6 or DG7 according to the Utility Regulator's definitions. Following that, it is date-stamped and 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, faxes and electronic mail.
- Second or subsequent complaints are included.
- General complaints are included.
- Complaints that may seem unfair or frivolous are also recorded.
- Complaints received by Consumer Council for Northern Ireland are also included in these figures.
- Complaints written on returned Company letters or stationery (e.g. bills) are included.
- Should the Company receive a petition, it is classed as a DG7 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.

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.

Exclusions

The following are excluded for 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.
- Public liability claims (although any related complaint should be included as normal)

End of Year (contacts not dealt with at 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 and the response time is also 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 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 DG7 complaint, if it hasn't been closed by the end date of the year end extraction, then this will not be reported in either this year or the following year's AIR Return.

Auditing

Internal audits

Following the in sourcing of Account Services Department from 1st December 2010, this process will now fall within the scope of the NIW internal audit process. Prior to December 2010 the process fell within the Echo Quality Management System which is audited several times a year under ISO9001/2000.

In addition each response undergoes Quality Assurance checks before issue. The first is carried out by the agent who has the item allocated to them. They check that the item has been correctly:

Categorised to DG7

Coded

Scanned to the correct account

The agent 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 Business review pack. Any discrepancies on monthly DG7 performance are raised with Echo and escalated. (Until 1st December 2010, when DG7 performance is entirely monitored by NIW.)

Monthly sampling of DG7's is also undertaken by NIW Contract Office to ensure consistency of DG7 categorisation.

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
Name of operator indexing correspondence.

It is at the indexing stage that the scanned items are categorised, thus allowing the description to be input above.

System Changes

There have been no system changes from the previous reporting period agreed by NIW.

Actual Data

Management reports are produced from the RapidXtra system, including a daily hit-list which identifies by section any item of correspondence outstanding.

RapidXtra DG7 analysis is produced monthly, and for the reporting year and provides the necessary information essential for the Director General's reporting requirements.

Written complaints for the year 2010/11 have been monitored, controlled and responded to by our Customer Relations Centre operated by Echo, until 1st December 2010 when the process was brought in-house, and managed by NIW Account Services Department.

Sampling

Sampling is not used in compiling data for DG7.

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.

Informs 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 month and year and will be completed month and year.

Every response answers all issues or questions raised by the customer.

Use of Telephone

Where appropriate telephone calls are used to respond to written complaints. Telephone calls are also used to update customers as the progress of complaints under investigation. The customer account is annotated with details of the call in these cases. Complaints closed to telephone calls also receive written confirmation.

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 recorded under DG9 telephone complaints not DG7.

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 despatch refers to the date a response is sent to the customer. The date of despatch is recorded as the date closed.

Response Time

This is the number of working days between receipt of a written complaint by NIW up to and including the date of despatch of the response. The date received, provided it is a working day, is considered day zero and the next working day is day one. Current guidance is for emails/faxes received on non-working days to be included in response time e.g. an email received on a Saturday should be counted as day zero, with the next working day (generally a Monday in this example) counted as day one. Whilst this approach was not in place during 2010/2011, processes will be in place by April 2011 to comply with this guidance.

Substantive Holding Reply

This is a response to a written complaint which advises the customer that NIW need 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.

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.

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 the 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.

CCNI Enquiries and follow up questions will not be recorded as complaints.

Complaints to or about Contractors

Complaints made directly to contractors about work carried out on our behalf will only be recorded if NIW are notified. If NIW are notified it will be recorded even it is handled directly by the contractor.

Complaints about contractors received by NIW are reported even if they are referred to the contractor to deal with.

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 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 analysed in the DG8 report.

The Rapid DG8 analysis report ensures we correctly identify each of the reporting requirements in the sequence shown.

Total Metered Accounts

The report confirms the number of accounts which either water or water and sewerage consumption is calculated.

Company Reading and Billed

If a Company reading has been taken during the current financial year and a bill raised 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)

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'

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

Billing Policy

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.

Customer Reads

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.

Data Collection

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.

Method of Meter Reading

Details of metered accounts scheduled for reading are transferred to an electronic data storage unit (PDA) from the Routestar system, which is subsequently updated upon the meter being read. The meter reading information obtained is then transferred back to the Rapid billing database from Routestar.

Policies

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 Meter Reader or Meter Query Technician replaces the meter, it is recorded on an MRD (Meter Replacement Docket) which their Field Manager signs off and sends to the MAM team, and "First Read New Meter" is logged on the handheld.

If a Meter Reader or Meter Query Technician cannot replace the meter, a MMR (Meter Maintenance Request) is completed which their FM signs off and sends to Meter Maintenance Team Meter Maintenance then forwards the MMR to the Contactor. When the meter has been replaced, the Contractor advises Meter Maintenance of the replacement details. The old and new details will then be returned by Meter Maintenance on a MRD to MAM for updating on the billing system

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 Meter Reader, 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 Reader checks the usage against the previous readings that are displayed on the PDA. If the usage appears to be abnormal, the Reader 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 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.

Data Transfer

Company Reads

Before the start of each reading period, whether monthly or six monthly, all accounts, relating to the specific period, are transferred from the Rapid system onto Routestar. The accounts are then downloaded onto the PDAs for the actual reading of the accounts. Each day the Reader will upload the PDA

and those accounts that have had a reading and or an abnormal reading indicator inserted are transferred to Rapid.

The data transfer from the Routestar to Rapid is not solely automatic and currently requires manual assistance.

Customer Reads

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

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.

Data Measurement

The Rapid billing system is used to provide the reporting information.

A new connection job closure ellipse report is generated every week to confirm property details. This information is passed to our meter installation contractor by secure FTP. The contractor installs the meter and provides a data file weekly with the meter details including the first read. Once this information is provided it is automatically uploaded into Rapid. The accounts are then included as part of the scheduled reading pattern. Data provided by the contractor is used to cross check this data.

Procedures

The data for DG8 reporting requirements is compiled by the Rapid billing system as the 'DG8 Summary Analysis' report. This report is based on meter numbers.

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 that are sent after this date will be included in the following reporting year's figures.

Sources of Information

The reading indicators are extracted from Rapid RPU005 meter consumption update screen. The "DG8 Summary Analysis" report extracts this information and compiles this in line with the requirements.

Assumptions

Those accounts excluded from the analysis are categorised using the definitions provided by the reporting requirements.

Other Issues

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

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 principle advertised customer contact points include:

- **Billing Enquiries:** 0845 877 0030
- **Waterline:** 0845 744 0088 (Customers telephoning Waterline are asked to press one for new water connections or hold for all other enquires).
- **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.
- **Debtline (Collections & Recovery Department):** 0845 8770 050

In addition, an MLA hotline (0845 300 6461) 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.

Company Agent

Northern Ireland Water (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 principal advertised customer telephone contact 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
- **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
- **Debtline:** Monday to Friday - 08.00 to 17.00
- **MLA:** 24 hours a day, 7 days a week, 365 days a year

A reduced service is available on the following main public holidays: Christmas Day, Boxing Day, New Years Day, Easter Sunday, 12th and 13th July.

Table 5, Lines 13-17**Total Calls Received on Customer Contact Lines**

This is defined as the number of calls that are received (including those which are later abandoned) on principle advertised customer contact points and make contact with a company agent or hear a recorded message that is not an all lines busy message.

Calls which receive an engaged tone or hear an all lines busy message are not counted as calls received, such calls are collected within the 'all lines busy' aspect of the indicator.

As per NIAUR guidance, where another party has been used to support call handling for example during a major incident, these calls will be included in our figures

Switchboard contacts from NIW staff are logged to a switchboard customer number and these calls are excluded from the total contacts received on customer contact lines.

All Lines Busy

The 'all lines busy' category measures the degree of difficulty customers experience in being able to connect with a company agent or automated system. All calls receiving an engaged tone or hearing an all lines busy message are reported. This also includes calls where a customer hears the engaged tone as a result of a problem with the line where the call has been received via Call Master (Call Master is a Cable and Wireless tool used to report on the activity of the ACD/switch. This is the stage before Call Media as this is the only point at which All Lines Busy can be monitored/reported on).

Total Calls Abandoned

The 'calls abandoned' category aims to capture the total number of callers who abandon their call before it is substantively answered by NIW. All calls abandoned, including those abandoned within 30 seconds are reported.

Call Handling Satisfaction

Call handling satisfaction aims to measure customers' satisfaction with the way NIW handles their telephone call. This is an annual score produced by four waves of customer satisfaction surveys conducted by McCallum Layton on behalf of OFWAT and Water UK. The results from asking "overall, how satisfied were you with the manner in which your call was handled" are used for the call handling satisfaction score.

Total Telephone Complaints

Please see below a list of issues categorised via CMS type. These include billing, water service and wastewater issues. As a general policy, NIW records all telephone calls about these issues as complaints:



Version 20 complaint
CMS codes.xls

CCNI: As a general policy, all correspondence from CCNI is received via email. These are recorded as Enquiry, Stage 1, Stage 2 and Follow up.

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.

Exclusions

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).

Telephone Complaints: 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).

Call Receipt / Telephony Structure

Telephone Providers Network

The supplier during the reporting year was Cable & Wireless.

Within Company Systems: Call Media

All calls delivered to the Call Media system are delivered 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/Validation

All calls are recorded within Call Media (the telephony system) including their status i.e. answered or abandoned. This is used in conjunction with the providers' network to determine calls answered, calls answered within 30 seconds, % calls abandoned and % lines not busy to understand full DG9 position.

DG9 performance is reported internally on a daily, weekly and monthly basis. Daily/weekly scorecards showing DG9 performance, including year to date performance are reported by Echo. A detailed monthly Business Review Pack is also presented to NIW within 5 working days of the end of each month.

NIW Contract Office run independent CorVu reports (for telephone complaints) and reconcile against those provided by Echo.

From January 2011 Contract Office will monitor DG9 calls for correct call categorisation.

Call Handling

Practices and Procedures

All calls received are managed by Call Media and routed directly to an appropriately skilled company 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. The majority of agents are multi-skilled, so this is the exception rather than the rule.

When a call is received, this is recorded on Call Media including wait time, call duration etc.

All enquires are logged on RapidXtra, the Customer Billing and Contact Management System by the company 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 via the RapidXtra Workflow Module. This includes instances where further 'back office' or NIW investigation is required in order to provide a response to the customer.

Inbox hit lists in RapidXtra are used to give real time visibility of cases outstanding including the date that the contact was received, the number of days the contact has been open, the contact type and references relating to the customer and the contact itself.

Transfers between Principle Advertised Customer Contact Points (PACC)

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 'Principle Advertised Customer Contact lines' which are delivered directly to the Call Media telephony system. Sampling, interpolation or extrapolation is not used in compiling totals.

An integral component of the Call Media system is the reporting module containing various standard reports detailing queue activity, including:

- Calls offered to a queue
- Calls answered on a queue
- Calls abandoned on a queue

Messaging

Use and activation of IVRs (Interactive Voice Response)

Interactive Voice Response (IVR) was not used by NIW during the reporting year. A recorded introductory message however was set up and assigned to each queue, i.e. Billing Enquires Line. The message greets the customer and thanks them for calling the relevant queue. It explains that an agent will be with them shortly and to note that calls are recorded to help provide quality assurance and training.

For Waterline, customers hear an additional message, "press one for new water connections, or for all other enquires please continue to hold".

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.

Where an incident has been declared, NIW may authorize the use of a recorded message to intercept and answer customer calls. This message will be heard by all customers on whatever line has the message applied to it.

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.

Use and activation of touchtone systems

Other than recorded messages and the option customers hear when they contact Waterline “press one for new water connections, or for all other enquires please continue to hold”, no touchtone systems were used during the reporting year.

Company Systems

Telephony

Systems comprise of a suite of Avaya products and a Call Media ACD. The Avaya switch is tightly integrated with the Call Media platform which provides Computer Telephony Integration (CTI), Automatic Call Distribution (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

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.

Appendix 1 illustrates the telephony infrastructure and shows how the telephony components integrate with the overall operation. Please note however that not all components have been enabled during the reporting year (i.e. customer self service voice – speech enabled).

Other Issues

Abandoned Calls

During the reporting year, NIW was unable to differentiate between calls abandoned within 10 seconds and over 10 seconds. During the reporting year

NIW reported total calls abandoned within 30 seconds and over 30 seconds.

Type Talk and Text Phone

NIW has provided for a standalone Textphone service for use only by customers who have their own textphone. This service is provided for customers with hearing difficulties.

Type Talk is a third-party service whereby the customer rings a Type Talk 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.

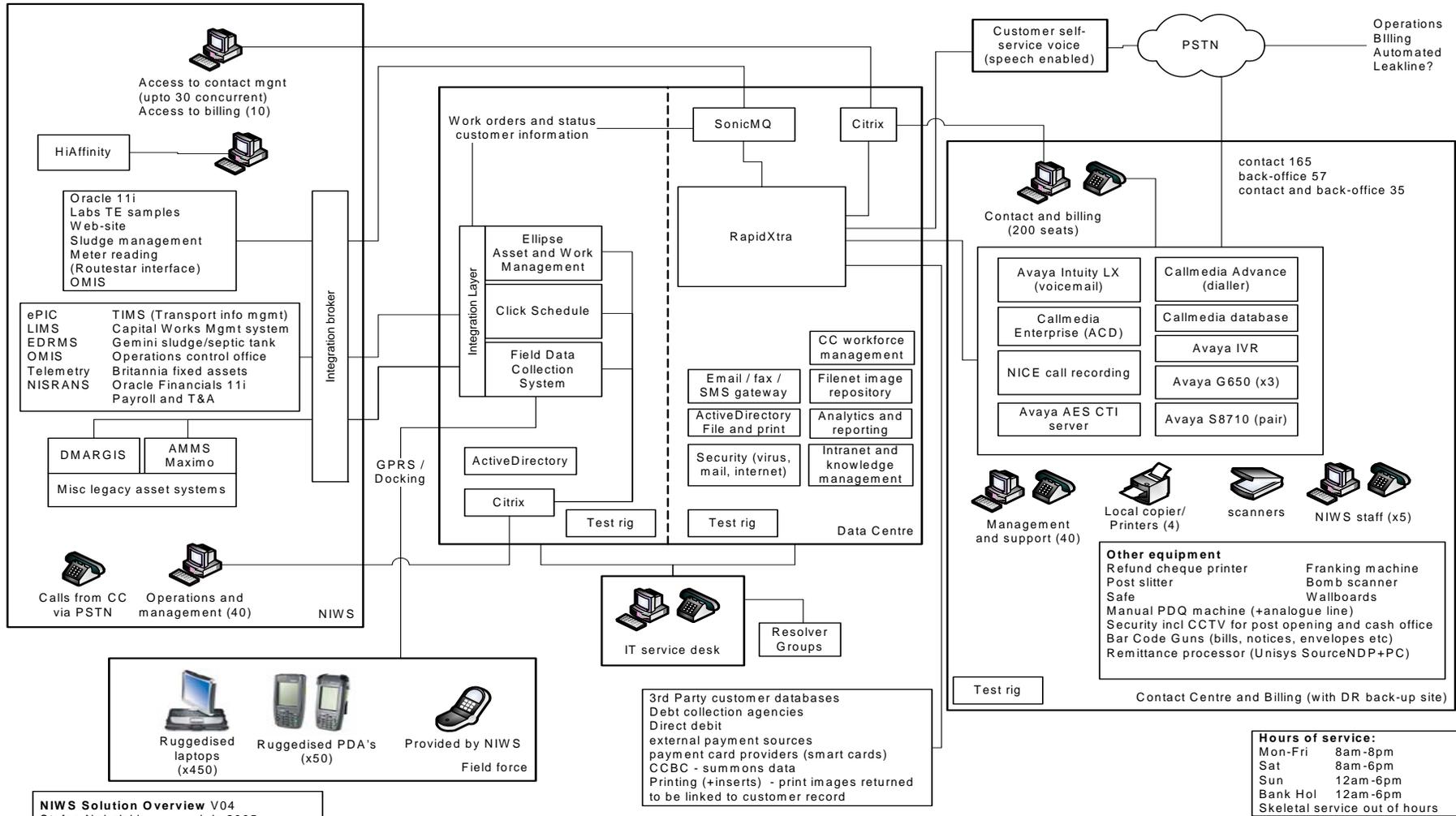
Rejected Calls

During the reported year calls currently rejected for any of the following reasons are not included in total calls received. :

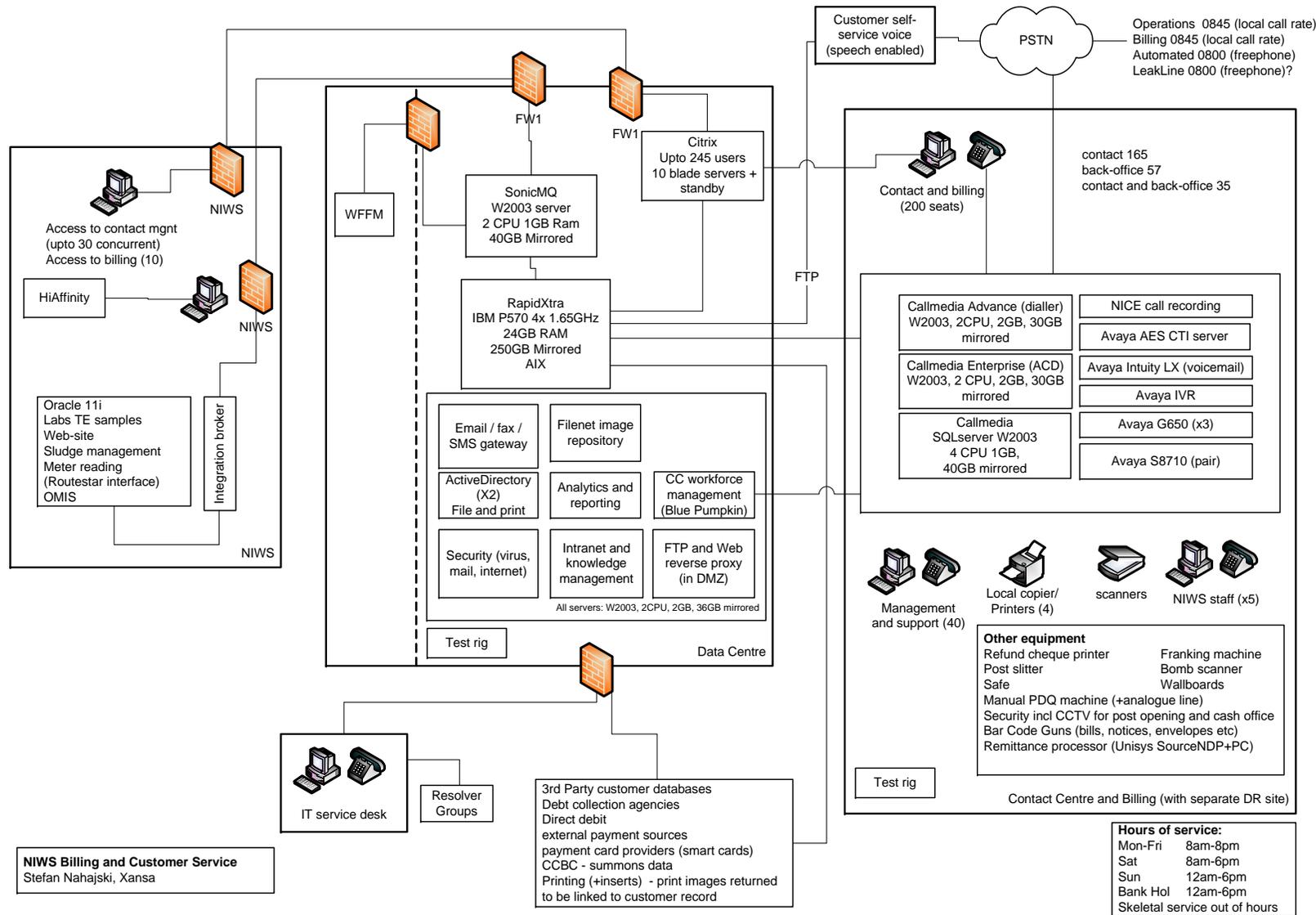
- The time being out of working hours
- There being no users currently logged on with the skill to handle the task
- The queue is too full and cannot accept any more tasks. Each queue holds 500 calls at any one time.
- The task queued for the 'Max Queue Time' and was returned to the connector.

Appendix 1

The schematics below, supplied by Echo, illustrate the telephony infrastructure and show how the telephony components integrate with the overall operation. Please note however that not all components may have been enabled during the reporting year (i.e. customer self service voice speech enabled).



NIWS Solution Overview V04
Stefan Nahajski, July 2005





Annual Information Return 2011

Section 4

Customer Research Appendix

Annual Information Return 2011

Customer Research Appendix

Customer Satisfaction

One of the fundamental measures concerning the level of service received by customers is customer satisfaction. One of these measures, DG9, 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. In 2010-11 only 3 waves of interviews were carried out as the first wave coincided with the re-tendering of the contract. To counter this a larger sample size was considered (200) in Wave 4.

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 402 interviews in total – Q1 100 interviews, Q2 102 interviews and Q3 200 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	Total 09/10
5500	5714	5206	16,762

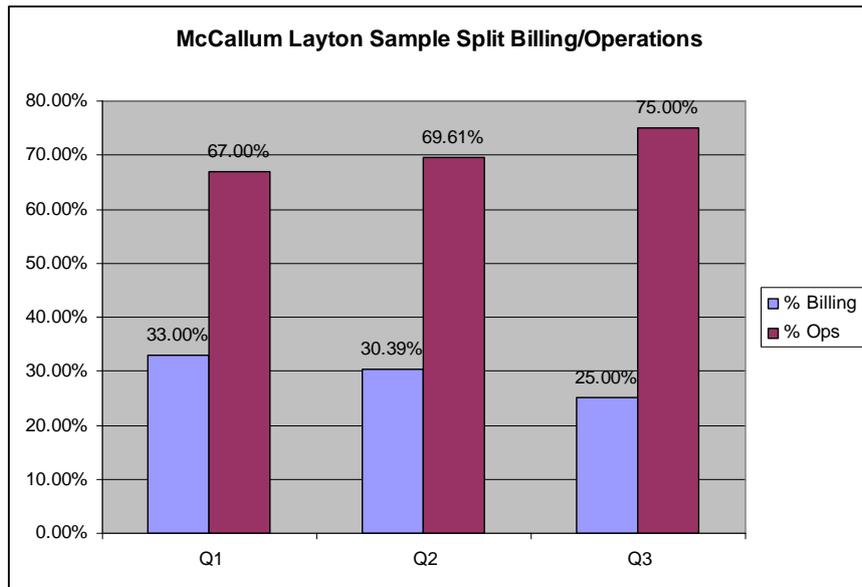
Sample Management

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.

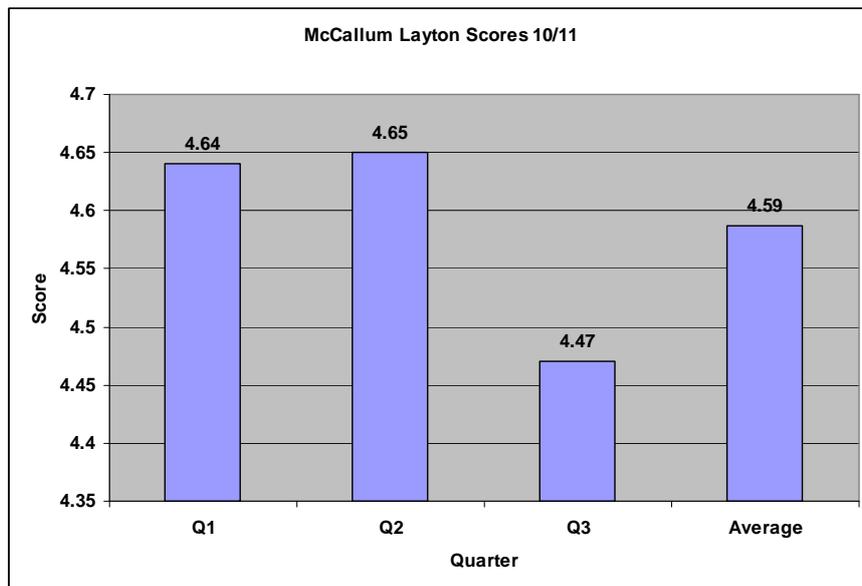
Given that NIW is not billing domestic customers (unlike other UK water companies), it is important to establish the proportion of calls received by day and query type to ascertain the quotas needed to ensure a representational spread of interviews was achieved.

The following table shows the NIW percentage split for billing and operations, per quarter.



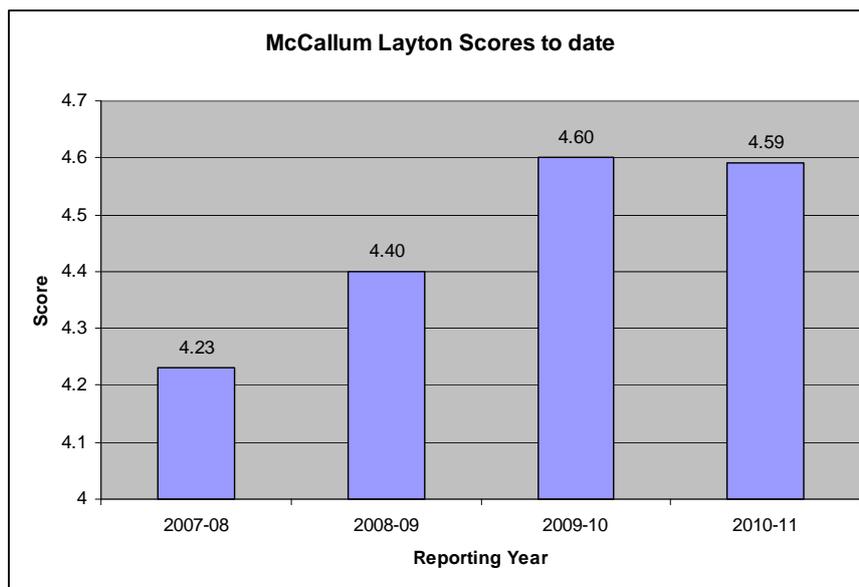
Overall Performance Assessment

NIW achieved an overall score of 4.59/5.0 for the reporting year, just falling short of the target set at the beginning of the year of 4.65, as follows;



In the last quarter of 2010/2011 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 a slight decrease this year, as follows;



Customer and Stakeholder Views for the PC10 Business Plan

As part of the PC10 submission, NIW commissioned the Consumer Council to carry out the customer research for the PC10 Business Plan on its behalf. The project was delivered by ICS Consulting via the OneAM consortium, and PIMR who are a Belfast-based market research company engaged by CCNI to undertake customer consultation on water issues.

The main findings of the research were:

- Maintaining the current level of drinking water quality was the customer's top priority when considering the water supply service we provide;
- Low water pressure was not an important issue for customers;
- The reduction of internal sewage flooding events was customers' highest priority, not only within Sewerage Services but when considering the service NIW provide in its entirety;
- Customers prioritised reducing the environmental damage the Company caused to inland water ways over pollution to coastal waters and carbon emissions;
- When considering the customer service that they receive from NIW, consumers stated that how quickly the Company responded to them when they needed something was their top priority; and
- NIW's customers have a much higher opinion of the company than media reports would suggest. For example, 82% of customers stated that they were satisfied with the service provided by NIW.

The research identified 24 recommendations to be taken forwards between CCNI and NIW. These can be found in the report attached below and available in the electronic version of AIR11.



Tapping into
Consumer Views on V

The publication of a 'Tapping into Consumer Views' update report was postponed due to the water crisis.

In February 2011 the CCNI published its "Left High and Dry" report, containing six high level recommendations.

We were informed by CCNI in March 2011 of their intention to extend the scope of 'Tapping into Consumer Views' to include improvements made by us resulting from the Freeze/Thaw 2010/11. They have since provided the amended terms of reference for the report, attached below and available in the electronic version of AIR11. It is proposed that the report be published by the end of July 2011.



ToR for Tapping and
water crisis review re

Codes of Practice

As required under Licence, NIW actively engaged with CCNI in the review of the existing customer Codes of Practice (CoP), and the drafts of the reviewed CoP's were submitted to the Utility Regulator by 31st May 2010 to comply with licence requirements.

These were first submitted on 31st May 2007 and we are required to review not less than once in every 3 years. Since the Licence then allows a period of two months for the Utility Regulator to review and approve the Codes. Formal comments on the draft CoP's were received from the Regulator and the drafts were revised accordingly, followed by further engagement with CCNI on the preparation of final typeset drafts.

The four CoP's, which have been agreed with CCNI, are:

- Water Supply Services;
- Sewerage Supply Services;
- Dealing with Leaks; and
- Complaints.

The final typeset drafts of these CoP's were submitted to the Utility Regulator on 14 April 2011, with a response received on 16 May 2011.

We had previously published another CoP on Priority Services. This CoP was not a licence requirement and therefore was not subject to the same regulatory constraints. Following review it has been decided to adopt a new approach in this regard. Given our target customer base, we have adopted a name, format and layout consistent with other NI Utilities to avoid any confusion. Following engagement and agreement with CCNI 'Priority Services' has been renamed 'Customer Care Register' including Critical Care.

A new CoP titled Billing and Metering for Non-Domestic Customers has been drafted, with CCNI engagement, and the first draft was submitted to the Utility Regulator on 12 May 2011.